

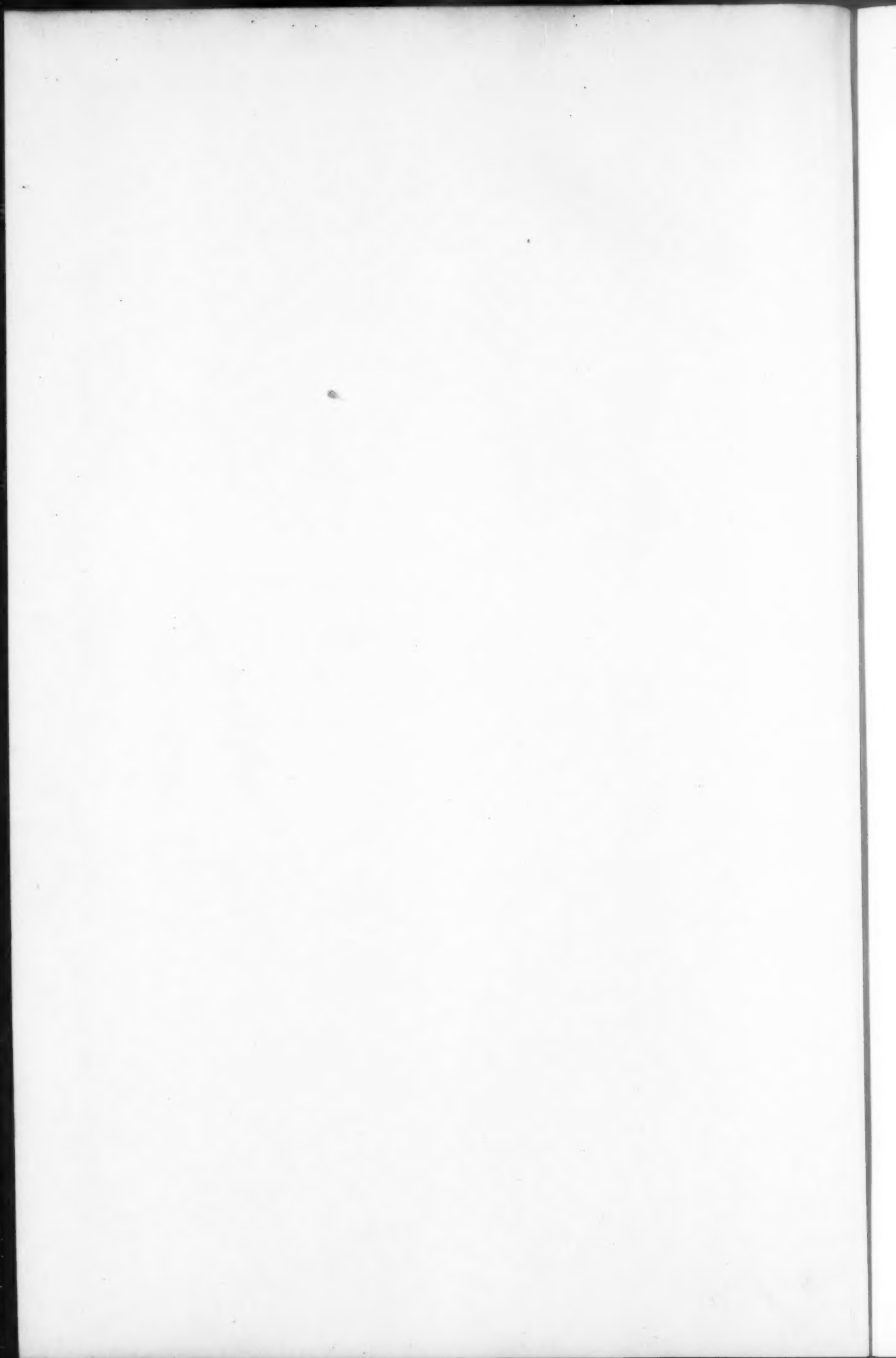
THE ARCHITECTURAL REVIEW

A Magazine of Architecture & the Arts of Design.

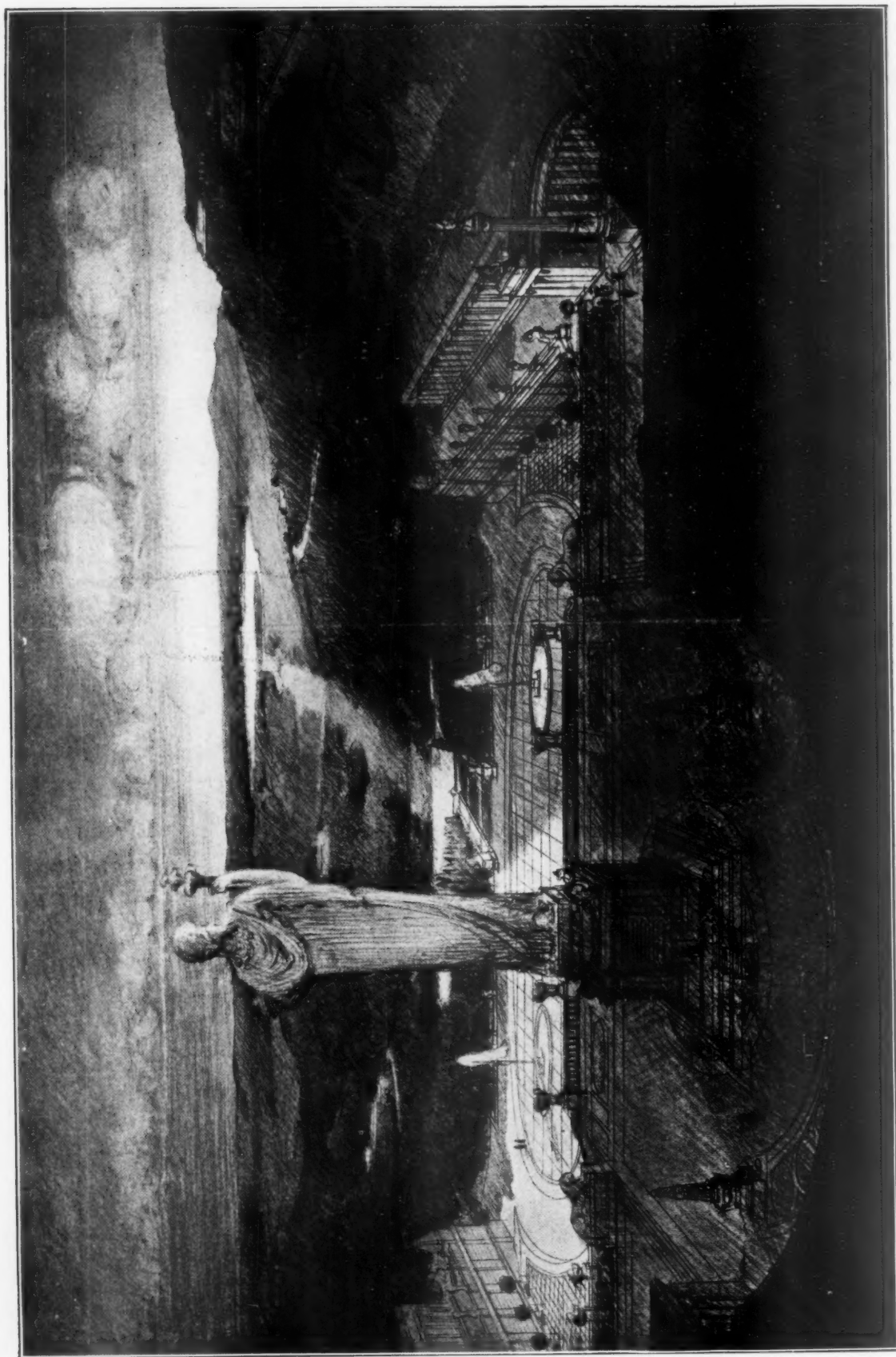
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THE ATHENÆUM, SHOWING VISTA TO THE SEA.

The City Beautiful—San Francisco

Rebuilt.—I.

SAN FRANCISCO having grown enormously in commerce and population during the past decade—owing to her trade with the Orient, the development of her natural resources, and her general pre-eminence as the chief port of the Pacific—an improvement in her architectural and topographical embellishment was generally demanded.

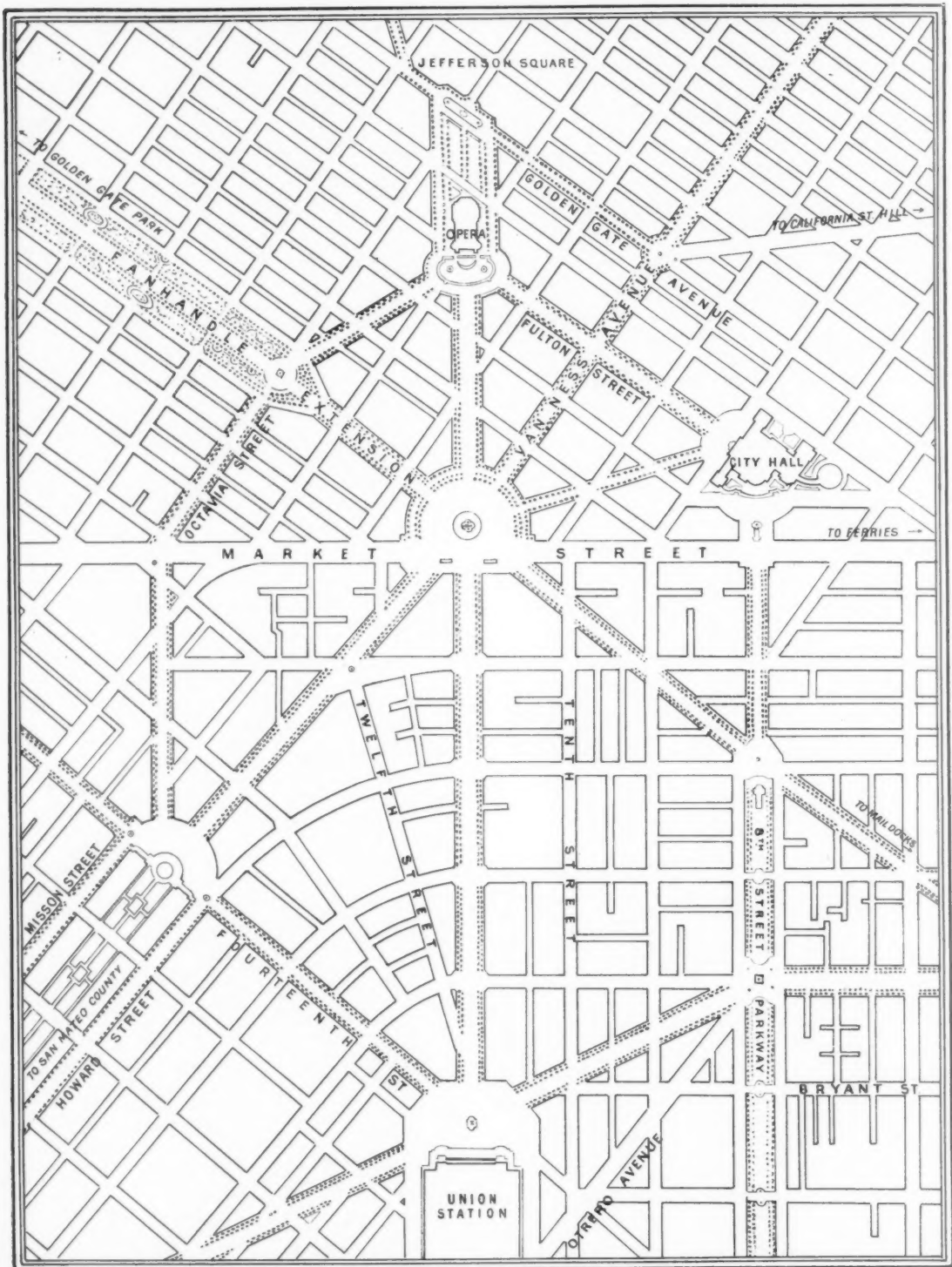
Under the leadership of James D. Phelan and many prominent and wealthy citizens, the Association for the Improvement and Adornment of San Francisco was formed on January 15, 1904. Realising the artistic possibilities of a city of hills so favoured by situation and climate as San Francisco, the Association announced as its main objects—the beautifying of the streets, public buildings, parks, and places, the study of the best methods for instituting municipal improvements, the stimulation of civic pride in private property, the encouragement of quasi-public enterprises, and the advancement of all that might help to make this the most beautiful and modern of all cities. The services of Daniel H. Burnham were secured—that eminent architect, under whose direction plans had been prepared for Washington, Cleveland, Chicago, and Manila, generously offering them gratuitously. A pleasant bungalow was built for him by his associate, Willis Polk, upon a spur of Twin Peaks, overlooking the entire panorama of the city, and here, in conjunction with the most talented artists and landscape gardeners, the noble plans were prepared. In September 1905 they were officially accepted by the mayor of the municipality. It is according to these plans that the new city is now to arise out of the ruins of the old without being extended over a long period of time in the usual manner of growth.

The most radical changes contemplated were in the nature of new streets and boulevards. The early San Francisco of the Spanish possession and “the days of ’49” had been laid out on a perfectly rectangular plan by surveyors who paid little attention to grades or æsthetic considerations. The checker-board pattern was intersected

diagonally by Market Street, the main thoroughfare, into which all other streets emptied like tributaries into a river. According to Mr. Burnham:—

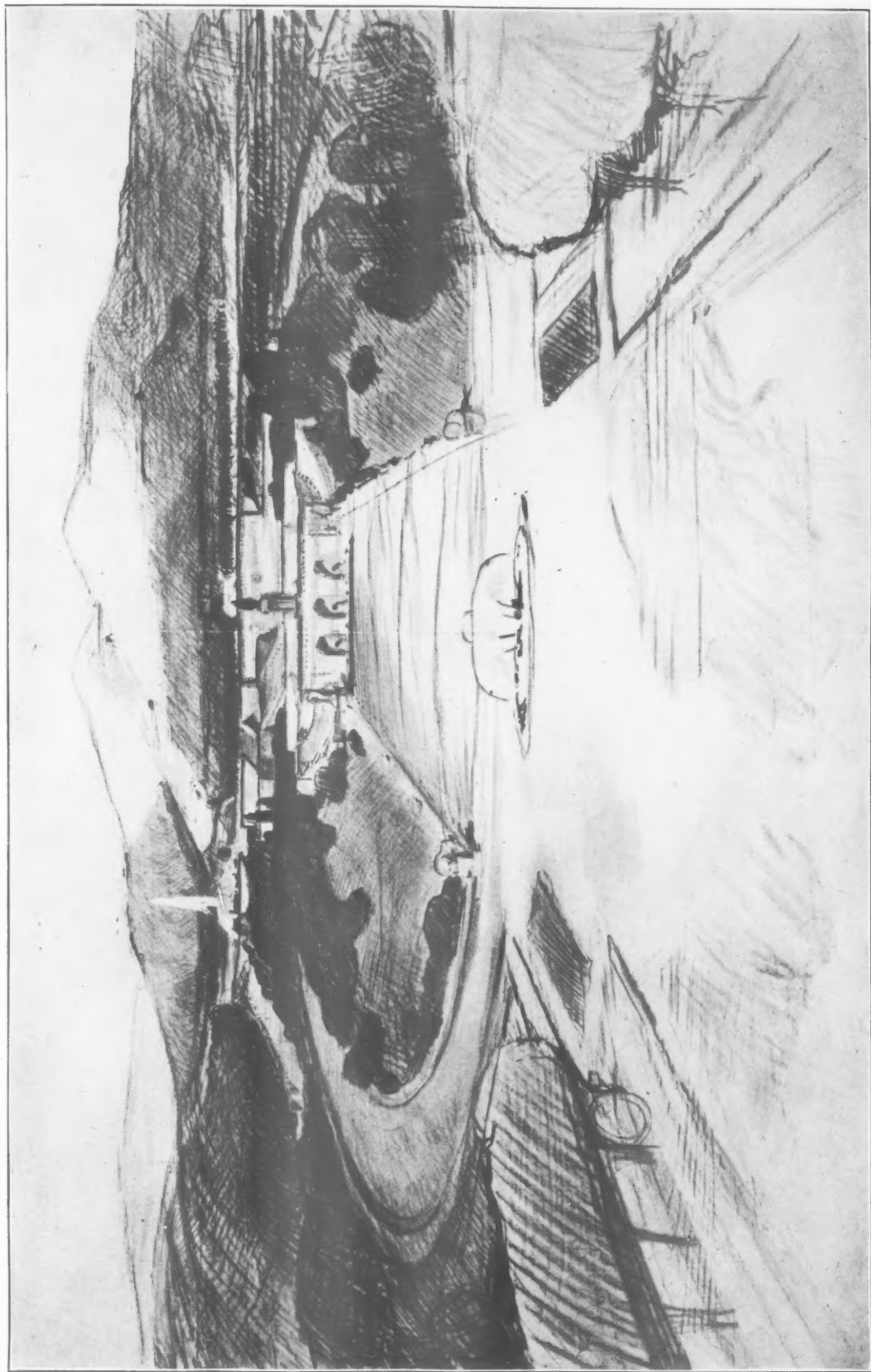
“A study of the cities of the Old World develops the fact that the finest examples—Paris, Berlin, Vienna, Moscow, and London—consist of a number of concentric rings separated by boulevards. The smallest of these rings, enclosing the civic centre—that portion of the city which plays the most important part in civic life—is located at or near the geographical centre. From this inner-circuit boulevard run diagonal arteries to every section of the city and far into the surrounding country. Intersecting in the first place the periphery, or outer wall, they traverse in succession the various circuit boulevards, which represent in themselves the successive stages of the city’s growth, and finally reach the centre or group of centres which, in a measure, they traverse to connect with one another and form continuous arteries from one side of the city to the other. It is on this study that the proposed system of circulation for a larger and greater San Francisco is based. Experience shows that the radial arteries should be many, and that the inner circuit from which they start should be small in radius. This circuit has been named the perimeter of distribution. It surrounds the centre which the radial arteries traverse (which may be termed the centre of circulation), and in conjunction with this it forms the civic centre.”

In San Francisco, according to this general theory, it was foreseen that the civic centre would develop about the core of the city in the form of a number of sub-centres at the intersection of new radial arteries with the perimeter of distribution. At each of these intersections there was to be a public place. The peculiar position of San Francisco upon the extremity of a peninsula bounded by the bay, the Golden Gate Straits, and the Pacific Ocean, disclosed a water-front for the periphery on three sides, thus calling for special considerations not necessitated in the planning of the European cities mentioned. The eastern



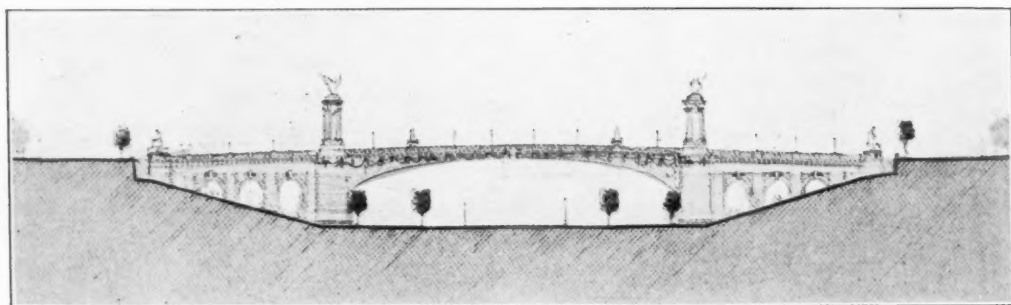
PLAN OF THE PROPOSED NEW CENTRE FOR THE CITY.

In view of the destruction of the City Hall the position of the new building would probably be reconsidered in connection with this centre



APPROACH TO TWIN PEAKS AS SEEN FROM MARKET STREET.

6 *The City Beautiful—San Francisco Rebuilt.—I.*



A SOLUTION OF THE CROSS-TRAFFIC DIFFICULTY. SECTION AT FILLMORE STREET.

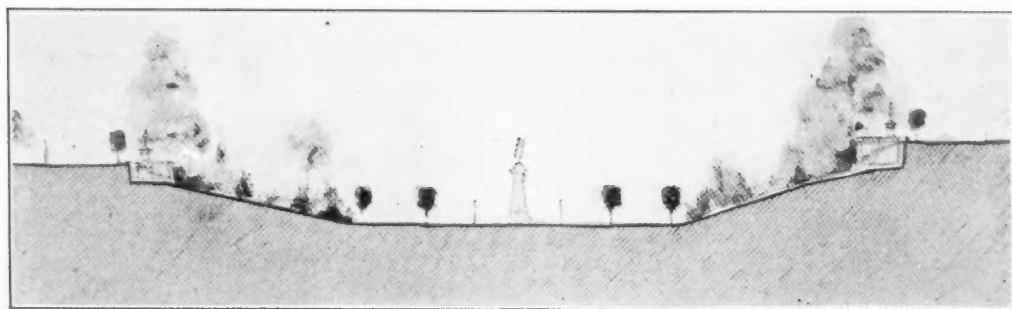
shore, fronting upon the bay, was the commercial gate to the metropolis, which received all its supplies from the surrounding country by water. Its western section once built up, the city could expand only towards the south, so the question of free communication with this southern country of suburbs called for a scientific solution full of provision for the future. The existing financial centre was at California and Sansome Streets; the manufacturing district lay south of Market Street. The new civic centre was to be placed where Market Street intersected Van Ness Avenue, a fine wide residential street where so heroic an attempt was made to arrest the terrible conflagration. This centre was to communicate with the others by means of the present diagonal main thoroughfare, and by the extension of other streets. It provided for edifices devoted to administration, education, amusement, and shopping of the finer order.

The architects realised that the arrangement of the innermost and outermost boulevards was quite practicable for San Francisco. But the intermediary circuit boulevards of concentric plan were obstructed by hills in various parts of the city. The plans, therefore, provided for an ingenious series of contour roads, circumscribing the hills and connected with one another on the level ground by arteries, thus completing an irregular chain as closely concentric to the inner circle as the land would permit. Of particular interest to all concerned with the modern and scientific

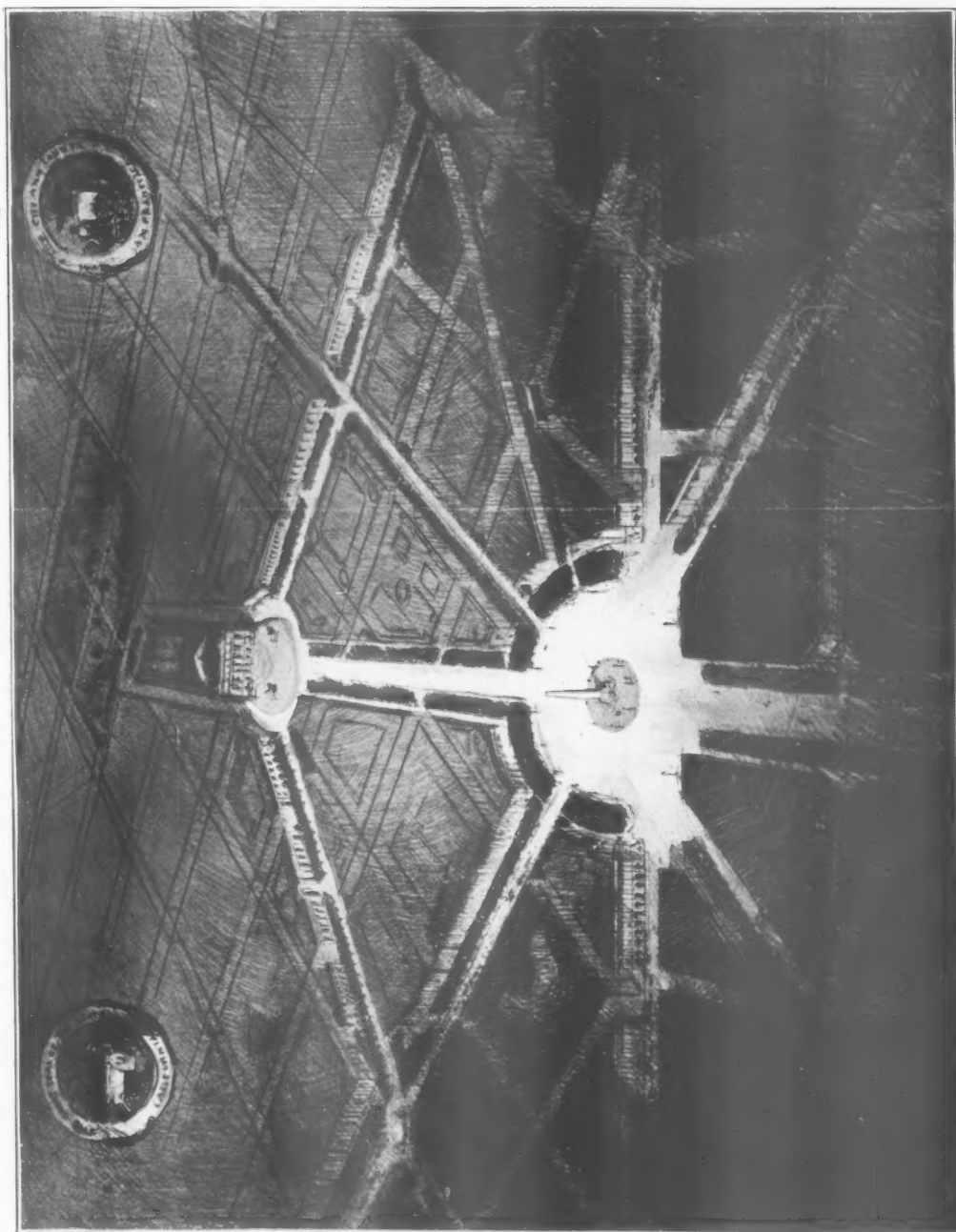
planning and readjustment of cities is Mr. Burnham's study of the constituent parts of the model metropolis of California:—

"The city may be divided into the following elements: 1st, Administrative and Educational; 2nd, Economical; 3rd, Residential. The first is the real being of the city proper; all else should contribute to its honour and maintenance. In its national character it guarantees the city's relation to the country and in its civic character to the citizens. This centre comprises, firstly, those structures devoted to the interests of matters administrative, of national, municipal, judicial, and educational character, grouped in proper relation to one another:—City Hall, Court of Justice, Custom House, Appraiser's Building, State Building, United States Government Building, and Post Office. Secondly, those structures, public or private, of monumental character and of great civic interest relating to matters literary, musical, æsthetic, expository, professional, or religious:—Library, Opera House, Concert Hall, Municipal Theatre, Academy of Art, Technical and Industrial School, Museum of Art, Museum of Natural History, Academy of Music, Exhibition Hall, and Assembly Hall.

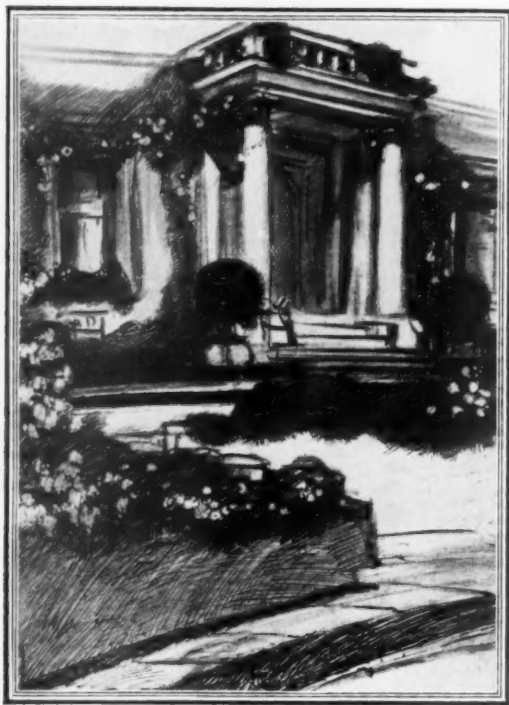
"These buildings, composed in æsthetic and economic relation, should face on the avenue forming the perimeter of distribution, and on the radial arteries within, and in particular on the public places formed by their intersection, and



A SOLUTION OF THE CROSS-TRAFFIC DIFFICULTY. SECTION AT STEINER STREET.



VIEW OF THE CIVIC CENTRE, LOOKING FROM THE SOUTH SIDE OF MARKET STREET.



SUGGESTED TREATMENT FOR EXISTING
DOMESTIC STREET FRONTAGES.

should have on all sides extensive settings, contributing to public rest and recreation and adapted to celebrations, fêtes, etc. Both groups, relating directly to the spacious *place*, the heart of the city's circulation, and removed from the direct flow and press of business, will gain in repose and strengthen the public sense of the dignity and responsibility of citizenship. A grand vestibule to the city should be placed on the chief radial line from this *place*. This will be the Union Railway Station, common to all lines." The accompanying plan and perspective show the general disposition of the civic centre.

We thus see how these vital features of the city were to be grouped according to their natural order and relation. Of the second and economical element of the city Mr. Burnham says:—

"It involves two considerations—distribution and finance. The first includes international and internal commerce, and comprises:—Wholesale Trade, Retail Trade, Manufactures, Dockage and Wharves and the Railway Dépôt.

"The freight dépôts, docks, and wharves group naturally on the water-front. They should be planned for indefinite expansion and connected with a complete system of warehouses—served on the one hand by railroad tracks or canals and on the other by broad roadways. The warehouse system should be so schemed as to distribute the

raw material directly to the manufacturing quarter, and other products as directly as possible to the wholesale trade districts. These in their turn must distribute easily to the retail quarter. The retail quarter follows, in general, in its growth, the residential districts which it serves, limited by the steeper grades of the contours. Thus the whole working city is governed in its location and growth by the two conditions of a maritime city—the water-front and the available level ground."

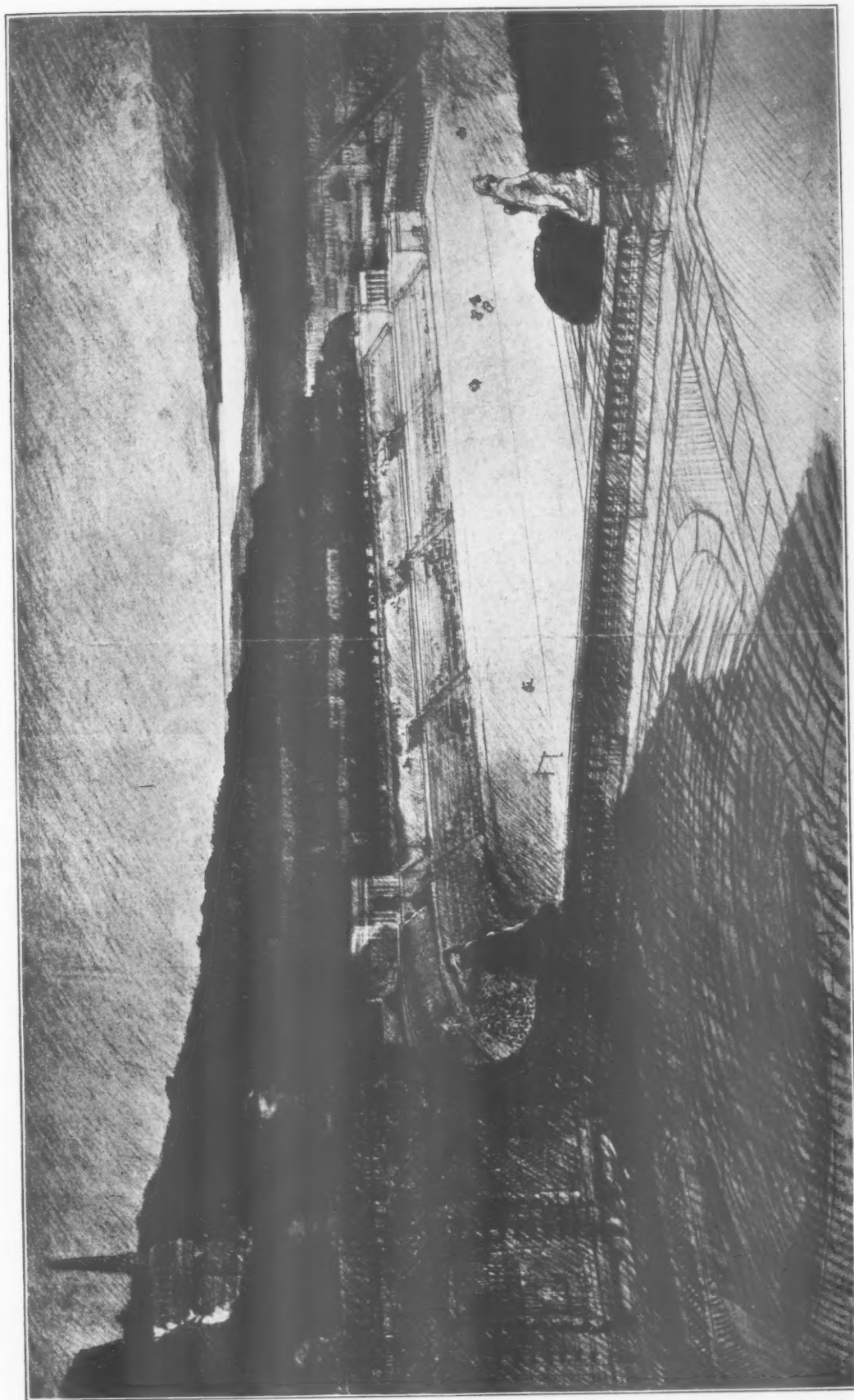
An immense extension of docks and wharves was contemplated to accommodate the constantly increasing shipping of San Francisco. The outer boulevard, without interfering with the wharfage, followed the sea-wall. Here piers for public recreation, a yacht harbour, and bathing-places (enclosed and open-air) were planned. The population from the poorer quarters would seek this outer boulevard to find refreshment in the pure sea-breezes. Transit, which in San Francisco had already attained so high a degree of perfection, was also considered in regard to the necessities of growth. As rapid underground transit best solves the problem of moving large crowds from one centre to another in a manner no surface traction can accomplish, and as it was desired to preserve the freedom and the beauty of the boulevards, the idea of providing the new main diagonal arteries with an underground service of cars traversing the circular centre by means of a loop was generally accepted. At least two subterranean lines were to cross each other at right angles to distant parts of the city.

"The wholesale quarter represents," says the official architect in his report, "natural products and manufactures. The former should be given precedence in accessibility to the retail dealers and markets for the daily distribution of perishable goods. When necessary the retail quarter should be relieved from congestion by arcades and should have broad sidewalks. The finance centre comprises banks, exchanges, insurance buildings, and general office structures. It is most naturally situated between the wholesale and retail quarters, should be directly accessible to these from at least one great artery of the city and also from the administrative centre. The ideal would be, perhaps, a financial forum, which, although surrounded and served by working roadways, should exclude vehicles from its centre. In the form of a court or series of courts it should be fronted by the most important and frequented financial concerns; the Stock Exchange placed as the focal point on the main axis."

HERMAN SCHEFFAUER,

Vice-President of the San Francisco Architectural Club.

(To be continued.)



THE AMPHITHEATRE.

The Milan Exhibition.—I.

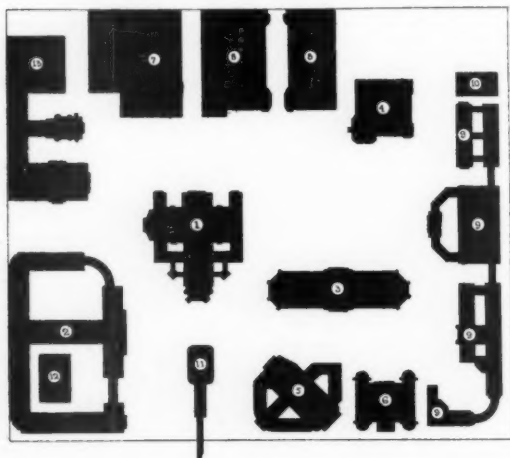
The Buildings.

AFTER repeated postponements, which would have been unnecessary if the work had been begun in due time—the scheme was promulgated as far back as 1901, and the plans selected in April 1903—the International Exhibition at Milan has at length opened its gates to the public. It is almost unnecessary to say that the buildings are not even now all of them quite completed, but while the finishing touches have still to be given the ultimate appearance of the buildings will not greatly differ from the official photographs which have already been published.

The authorities seem to have exercised the utmost care in the arrangement of the areas occupied, and every portion of the work, even to the design of the official seal and of the "manifesto" or poster, was put up for competition. It would seem, too, that the committee was very hard to please in the latter case, for the poster with which the walls of every town in Italy, from the Alps to Calabria, are at the present moment placarded, is the result of three separate competitions, the first two of which did not produce a design to satisfy them. In the competition for laying out the grounds more success was met with, as either the premium of £200 or the glory

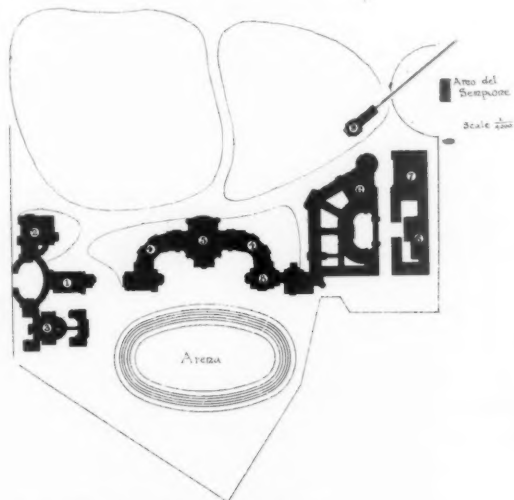
proper to the thing itself—perhaps both—produced eighteen designs of considerable merit. Two designs were bracketed first, and as a result the work was divided between the successful firms. To Sig. Sebastiano Locati, who was for some time Professor of Architecture at Pavia University, and his colleague, Sig. Orsino Bongi, of the Ufficio Tecnico of Milan, was allotted the task of laying out the Parco Reale. The work in the Piazza d'Armi fell to the portion of Sig. Carlo Bianchi, Professor of Ornamental Design at the Istituto Tecnico Superiore at Milan; Sig. Francesco Magnani, Professor of Ornamental Design at the Politecnico at Milan and editor of *l'Edilizia Moderna*; and to Sig. Mario Rondoni, junior professor of the same subject at the Politecnico.

The prevailing idea in the general arrangement of the block plan was to place all the buildings dealing with art in the Parco Reale, while the industrial work should be disposed in the Piazza d'Armi; but, as a matter of fact, it soon became obvious that the portion of the park which had been conceded was quite insufficient for the requirements, and the French and Austrian art sections have had to go over to the Piazza.



BUILDINGS ON THE PIAZZA D'ARMI.

- | | |
|---------------------------|-----------------------|
| 1. Marine Transport. | 8. Railway Transport. |
| 2. Machinery Hall. | 9. Agriculture. |
| 3. French Decorative Art. | 10. Roadmaking. |
| 4. Hygiene. | 11. Railway Station. |
| 5. Motor Cars. | 12. Silk Industry. |
| 6. Carriage Builders. | 13. Belgian Section. |
| 7. Austrian Section. | |



BUILDINGS IN THE PARCO REALE.

- | | |
|------------------------------------|----------------------------------|
| 1. Reproduction of Simplon Tunnel. | 6. Decorative Art. |
| 2. Retrospective Transport. | 7. Prevention of Accidents. |
| 3. Aquarium. | 8. Architecture. |
| 4. Fine Arts. | 9. Station for Electric Railway. |
| 5. Festival Hall. | |

The whole scheme is monumental, more by reason of fine planning than from particular artistic merit, and there are places where the critic is obliged to be content with the explanation that exhibition buildings are structures of a peculiar and ephemeral kind, and therefore the architect need not take himself altogether seriously.

The principal entrance is situated in the park, where there is a large elliptical court of honour about 180 ft. long by 140 ft., of irregular form and most effective. There is a colonnade round it, and opposite the gates, on the minor axis, rises the Galleria del Sempione, containing the sections of the Simplon Tunnel. Right and left, on the major axis, lie the Aquarium and the Retrospective Transport buildings. All these structures harmonise with the design of the court, and though instead of two ovoid tunnel-mouths the conventional mind asks for the more usual triumphal-arch form of a central opening flanked by two smaller ones, the obvious *raison d'être* of the arrangement disarms criticism to a large extent. But it does not prevent us from noticing (and unhappily this applies to most of the buildings) that in the detail there is sometimes a tendency to introduce incongruous and unlovely ornaments mixed with a reprehensible degeneration into the lowest depths of "l'Art Nouveau." It is not denied that railway buffers have their uses when properly applied to rolling stock, but they are not things of beauty, and are out of place on the voussoirs of an arch. They resemble nothing so much as colossal shirt-studs embedded in the plaster. Nor is the detail of the courtyard to be greatly admired with its square and slender coupled shafts divided into square blocks and surmounted by debased Ionic capitals from which the abaci are wanting.

The allegorical group between the tunnels representing "Mining" is the work of the Italian sculptor Sig. Enrico Butti. The four figures of Victory on the pinnacles, waiting to crown the visitors, and the colossal Mercury on the highest peak of all, inviting the crowd to come and see the wonderful tunnel placed under his especial care by a discerning committee, have been modelled by Sig. Brivio.

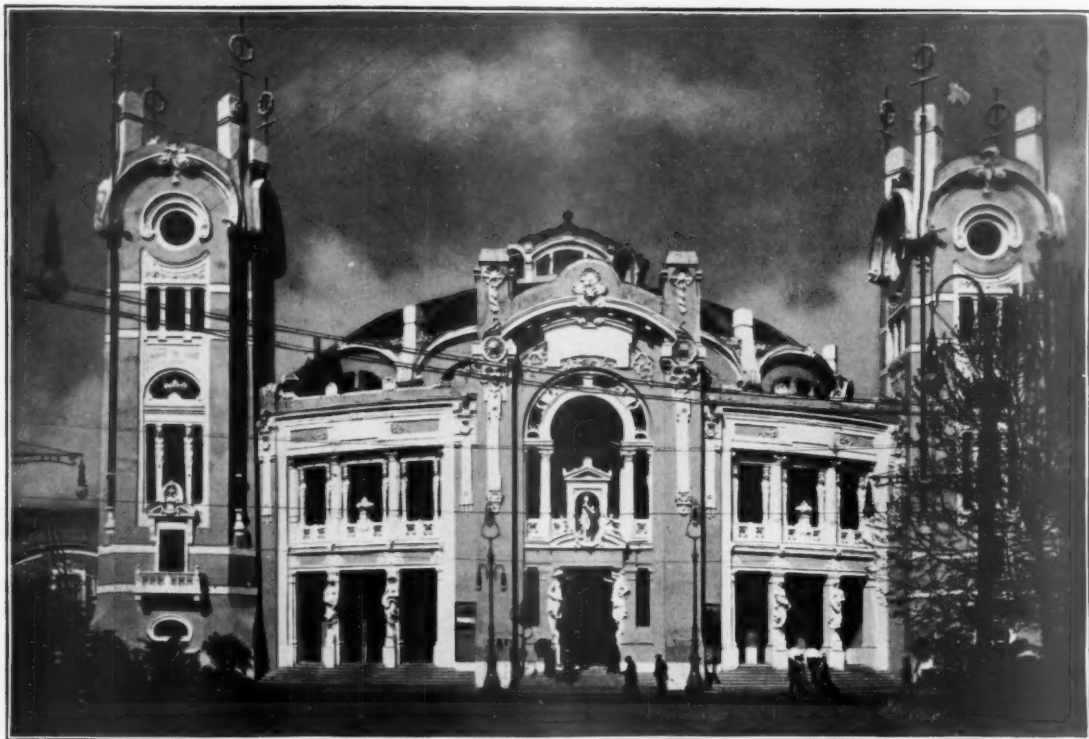
There is much interest of a different nature involved in the building devoted to the Aquarium, for it is to form a permanent record of the Exhibition long after the other pavilions have passed away and their very sites shall be forgotten. It is to "form an interesting field for the study of all materials and methods used in construction"—we quote from the *Monitore Tecnico di Milano*. It is pleasing, therefore, to notice that an English firm, Messrs. Mellows, have secured the contract for the glass roofing. This, by the way, although

it is the usual form used at home, seems to be quite a novelty in Milan, as nearly all the technical papers give elaborate sectional drawings of the iron bars and expatiate upon its wonderful cleverness. The design of the building has evidently received more care than was bestowed on that for the Galleria del Sempione, perhaps on account of its permanent nature, and displays an artistic feeling of a high order. The ornamentation is symbolic, and not overdone; and there is nothing obtrusive to compete with the railway buffers next door. Every kind of sea monster and marine growth figures on the façades, but the decoration is kept well under control.

The internal arrangements of the Aquarium are of an up-to-date character. There are three large underground storage tanks for sea water, the largest having a capacity of 85 cubic metres (about 350,000 gallons), and the other two a capacity of 43 cubic metres each (about 175,000 gallons). These tanks are built of reinforced concrete, and the vault above them forming the floor of the Aquarium is of the same material. All three tanks are lined with plate glass. The show tanks are arranged round an oval gallery, and the water supply from the reservoirs is kept in circulation throughout the whole series by means of pumps. In order that the water shall remain clean during its passage through so many different tanks each compartment has an elaborate filter bed underneath, through which the water is forced before entering the next chamber. The temperature is, of course, under control, and in order to guard as far as possible against local variations the show tanks have hollow walls of plate glass. The whole building is top-lighted.

The statuary—and an exhibition building is as nothing without statuary—is from the chisel of Sig. Labò, one of the most distinguished among the younger generation of Italian sculptors. The colossal Neptune over the entrance is something like 15 ft. high, and modelled with plenty of force, though we are ignorant as to why he should be given a cast of countenance so bestial and repulsive. It is clear that the authorities in Milan have known how to get the best work from the best men so far as sculpture is concerned, but in Italy a sculptor's work is more likely to receive the appreciation due to its merits, and where the standard of the demand is high the standard of the supply will almost invariably attain to the required excellence.

And from sculptured ornaments it is natural to turn to the buildings devoted to sculpture pure and simple and to painting. Architecture was to have been housed under the same roof, but was crowded out by the number of exhibits sent by followers of the sister arts. It has now a separate



FESTIVAL HALL.



ENTRANCE TO FINE ARTS SECTION.

pavilion, forming a portion of the irregular line of buildings grouped, as far as possible, so as to harmonise with the old grass-seated Amphitheatre built when Napoleon ruled in Milan and crowned himself King of Italy; this last intended, no doubt, for classic displays, but now affording a convenient abiding place for Buffalo Bill and others of that ilk.

In the centre of the group stands the Festival Hall for concerts and similar gatherings, a circular building covered by a flat dome and flanked by imposing but overdone towers with sloping sides, suggesting the solidity of granite rather than the flimsiness of bamboo and plaster. But the all-powerful committee decreed that the style should be "Barocco"; and who does not know what that may mean in able hands? On either side of the hall are ranged the Fine Art Galleries, built in sweeping curves, as if to embrace the Amphitheatre in their arms. Whether the view be from the "Pulvinare"—the great entrance to the Amphitheatre—or from the park grounds, the grouping is equally good. Internally the adoption of curved galleries for art exhibits produces fine effects, and is an improvement upon the more usual rectangular form, in which the eye is bewildered by seeing too much at once. The galleries are decorated internally in flat masses of secondary colours suitable to their purpose. The interior of the Concert Hall cannot be so quickly passed over. By order of the committee presumably, it is even more "Barocco" than the outside would lead one to suppose. Pale sage-green walls yield unwillingly to a pale blue dome dying into white at the zenith. The columns supporting the dome and arcades are shaped into realistic tree-trunks (of plaster); and when they have, at the level of the balcony tier, submitted to being crowned by much-begilt capitals remotely resembling Ionic (only the volutes are broken-backed and the abaci again are missing), they break off into branches with white leaves and golden flowers, running in all directions in indescribable confusion all over the roof.

The fiat of the committee has been obeyed, and the style is "Barocco."

It was fortunately decreed by the same august body that the style of the art galleries should be "suggestive of the Renaissance," and the entrance front towards the Galleria del Sempione is, while perhaps not more than suggestive of the Renaissance, effective with its circular opening, statuary, and inevitable red Venetian masts. At Milan their labour is but vain who build without Venetian masts fresh from San Marco and laurel wreaths redolent of Paris and the Place de la Concorde.

We were told that the building for Architecture was designed in a modern Greek style. The text-

books we fed upon in our pupil days dished us up many styles from many countries, but this one style was missing from the menu. It is no doubt meant to be a modern life infused into classic forms; but the very words "classic" and "modern" are the undoing of each other. The use in this building of an exclusively Greek composition tricked out in the finery of the modern style—or as it is called in Italy, the *style liberti*—is unfortunate to English eyes. But each nation must be allowed to enjoy its own taste. The official journal of the Exhibition dilates on it with enthusiasm, and after a long dissertation on the beauties of the Greek style in general, says, "And so also our own pavilion of Architecture is in the Greek style. Was it tradition, or sentiment, or recollection, that impelled us to it?" And the conclusion reached is that it was a little of all three.

The building for Italian Decorative Art is chiefly singular on account of its plan. It is true that it was more or less governed by the fact that no erection was allowed to infringe upon the limits of the permanent main roads in the park, but Italian architects are less accustomed to planning buildings for irregular sites, and endeavour as far as possible to obtain rectangular forms. The result is that the covered portions are more or less regular, and the open courts are cut up into the oddest of shapes, which, owing to their ample dimensions, scarcely ever fail to produce fine perspectives. The same principle of curved galleries already noticed in the Fine Arts section prevails here, and is treated in much the same way. It is a pity that the splendid peristyle enclosing the entrance court with its effective pylons and dashes of bright colour does not face the open park, whence the effect would be greatly enhanced. Close as it is to the smaller building for Decorative Art and Accident Prevention (what the connection between the two exhibits may be is not easily guessed), the full force of the design is missed.

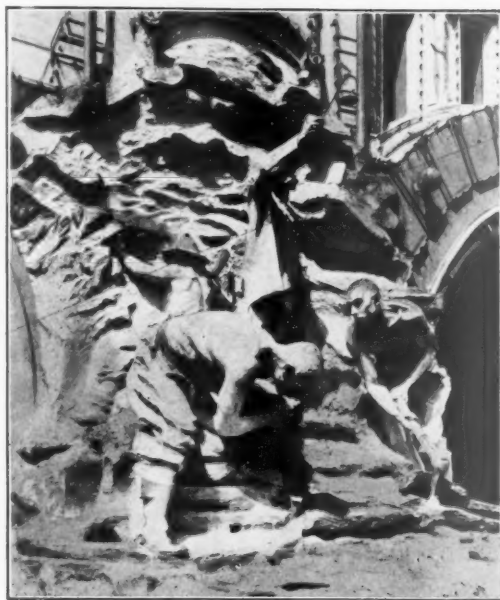
In the Piazza d'Armi we are immediately conscious of a different hand at work upon the plan, but the difference of ideals is more apparent than real. The park is a public garden already laid out, and compelling the architect to obey its restrictions. The Piazza d'Armi, on the other hand, is an enormous rectangular gravelled square, used (as its name implies) for military exercises. There is nothing to spoil, and the structures may be placed according as fancy and convenience dictate.

The central position is occupied by the Marine Transport building, wherein are to be seen models of ships ancient and modern, peaceful and warlike, and all things akin to the seaman's calling, from turret guns to fishing tackle. The pavilion covers an area of 10,000 square yards, and consists

mainly of two long halls crossing at right angles, incrustated with little galleries and projections, which seem to make the elevation disagree with the plan. That this sometimes happens in drawings we most of us know, but to obtain this effect in an actual building must be rare. Symbolism runs even greater riot here than in the Galleria del Sempione, but it is a very striking symbolism. By some subtle touch of the designer the building is salted with the sea. Not only does the lighthouse inevitably proclaim its object, but the bold curves on the base walls have the smack of a ship's lines, and the windows over the smaller entrances come straight from the galleried sterns of Nelson's days. Yet none of it is forced. There is too much playfulness, perhaps, in the masts and yardarms with pulleys and cordage, but in the main the design is simple and convincing. They know in Milan how to treat a big arch-span with little adornment and yet make it effective. There is a fine example of this in the central façade towards the Austrian pavilion. The sculptured groups on either side of the entrance (facing the railway station) are by Sig. Grossoni, and are among the best in the Exhibition. They represent Neptune riding on a huge shell and drawn through the billows by sea horses which melt artistically into waves and defy description. They resemble Mr. Walter Crane's "Sea Horses" in spirit and design.



PRINCIPAL FAÇADE, MARINE TRANSPORT BUILDING.



"MINING."

GROUP BY SIGNOR ENRICO BUTTL.

But the most striking façade in the whole Exhibition is that of the Galleria del Lavoro, or machinery hall. In the first place the building is the largest and occupies an area of about 24,000 square yards, with a central gallery nearly 500 ft. long and 100 ft. wide, filled with moving machinery, where

All day long the iron wheels are turning, and where those who are interested may see raw material passing through all the various processes of manufacture till the finished article is produced.

The effective employment of wide arch-spans is particularly noticeable here. There are three of them—the central one, over-ridden by the graceful gilt dome, being larger and enclosing a vast window with radiating bars like the ribs of a fan, in the centre of which sits (as yet she does not sit there, and the vacant space awaits her coming) an allegorical figure no doubt emblematic of "Work." On either jamb of the entrance there are sculptured groups in mezzorilievo by Sig. Carminati illustrative of the "Glory of Work," but the number of workmen represented as toiling for their daily wage produces rather a confusing result. There is an appealing gracefulness of line shown here too, and the spaces between arch and gable are refreshingly devoid of decoration; for, although it can scarcely be said that any of the designs are overcharged, the ornamentation in a long series of buildings such as this exhibition has produced seems to have a cumulative effect upon the eye, and the few frankly blank wall spaces are as welcome as an oasis in



ENTRANCE TO THE GALLERIA DEL SEMPIONE, SEEN FROM THE OUTSIDE COURT.



ENTRANCE TO PAVILION FOR ITALIAN DECORATIVE ART.

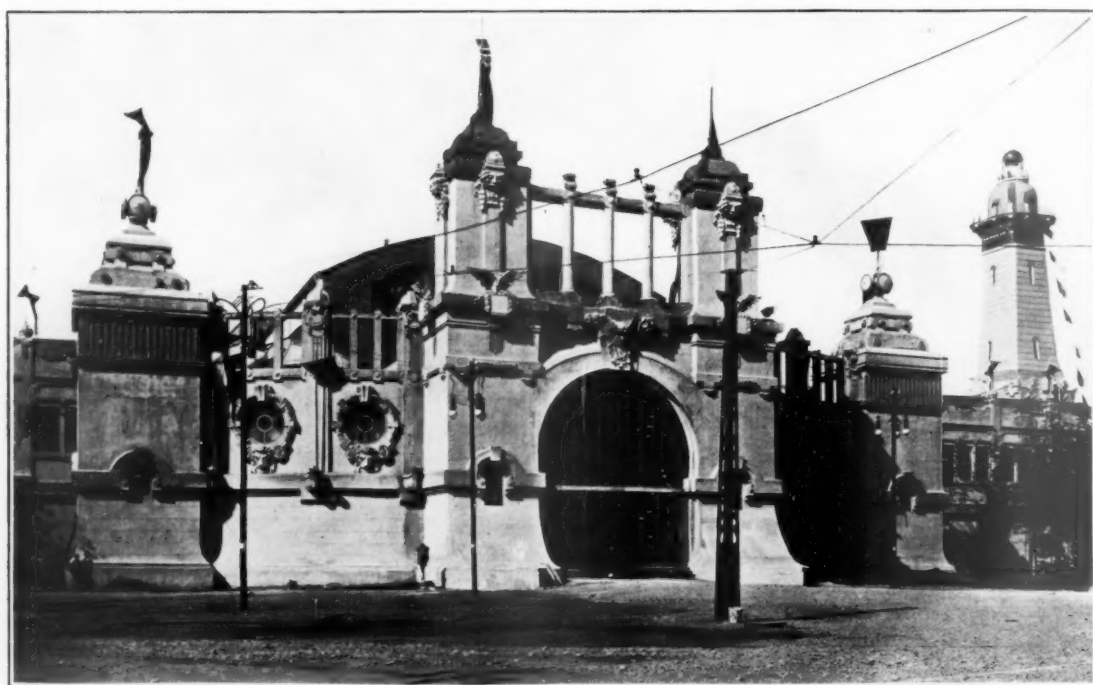
the desert is to a weary traveller. There is a feeling of strength in the towers between the bays, and the size and position of the windows in the dome allow the light to pass right through, so that instead of presenting the usual dull patches of leaden grey they are translucent, and the colours of the stained glass are rendered sufficiently vivid to affect the external elevation. The dome is covered with zinc soldered into one huge sheet, without a passing thought for the vagaries of expansion and contraction. Bearing in mind the differences in temperature between summer and winter in Italy it seems a false economy of labour to have been content with slipshod methods. As a consequence the roof has already begun to show signs of creeping into "ripples." The state of the roof when the Exhibition closes its doors in six months' time is a matter for speculation.

In the French pavilion for Decorative Art the chief interest lies in the difference between its style and that of the rest of the buildings. It is inexpressibly French; anybody with the smallest pretension to a knowledge of the styles would unhesitatingly point it out for what it is; and yet it was designed by the Italian architects who planned the other works in the Piazza d'Armi. It came as a surprise to learn that the architect was not a Frenchman, but perhaps the fact that the work has been entrusted to French craftsmen may in part account for the result. There is none of the trickiness of plan introduced which is the chief feature in so many of the other buildings, for we



ENTRANCE TO HYGIENE SECTION.

have to do with a straightforward rectangular structure with ends fashioned into half octagons. The richness of effect is produced, therefore, solely by the application of ornament. It is the "Frenchness," if the term may be allowed, of this which gives it its decidedly national character. Perhaps it is unfair under the circumstances to institute a comparison between French and Italian ideas, taking these buildings as a criterion; but although



MARINE TRANSPORT. ONE OF THE MINOR ENTRANCES.

in the Italian pavilions there is a better appreciation of the proper positions in which ornament should be bestowed, and a nicer balance of its general proportions, it would be unjust to deny that there is a far greater richness and elaboration of detail in the work of the French decorators. The groups of sculpture at the principal entrance are by an Italian, Signor Labò, whose other works have already been noticed. In one the Genius of Sculpture is modelling a Caryatid, and in the other the Genius of Painting moulds the form of a young girl, an allegorical presentment of colour. The pavilion devoted to Hygiene stands rather in a corner by itself, as if not quite approving of its lighter-hearted neighbours, though it cannot certainly lay claim to any superiority in the matter of the wearing apparel with which Signor Bongi, the architect, has seen fit to clothe it. A flight of steps with fantastic ramps; two classic (?) columns in antis between the now inevitable sloping-sided piles round which health-giving gods and goddesses (in the intervals of health-giving) wave palm branches and play at "Here we go round the mulberry bush"; the usual shield-like masses of decoration with the usual bright-coloured triple streamers; the word "Hygiene" in yard-high letters—and you have the whole façade in little. It is to be hoped, however, that the Milanese may gather under this roof enough material from better-informed nations to persuade themselves how far Italy lags behind on that road which leads to the *mens sana in corpore sano*.

Probably the most striking sign of the progress made in the last decade is the Palazzo dell' Automobilismo, or Motor Car Exhibit. When we recollect that less than ten years ago such a thing as a motor car was unknown, it is astonishing to see this huge building, consisting of a central hall and galleries enclosing four large courts, filled to its utmost capacity with a multiplicity of exhibits connected with this trade of mushroom growth.

The straight and severe lines of the main roof have not in this case been masked with a shell of plaster, and yet those responsible have understood how to rob a plain iron and glass roof of its innate ugliness. The means adopted are simple in the extreme, and there is but one fault to be found with the design, that in some aspects the towers which break the austerity of the straight lines appear to be rather thin. The arch over the entrance is overloaded and reminiscent of the strange Gothic of Orvieto. There is the universal tendency to break up the decorated parts into innumerable slabs, panels, and compartments of bewildering forms, and then fill them up with ornament; the uncouth scrolls and the features met with in unaccustomed positions begin to resemble our Jacobean work. It is a tendency not

to be praised. There is no meaning whatever expressed in the front, and if a message could be extracted from it we should guess that a three-naved arched construction lay behind. This is not the case, however, and the buttress masses have to withstand no thrust of any kind.

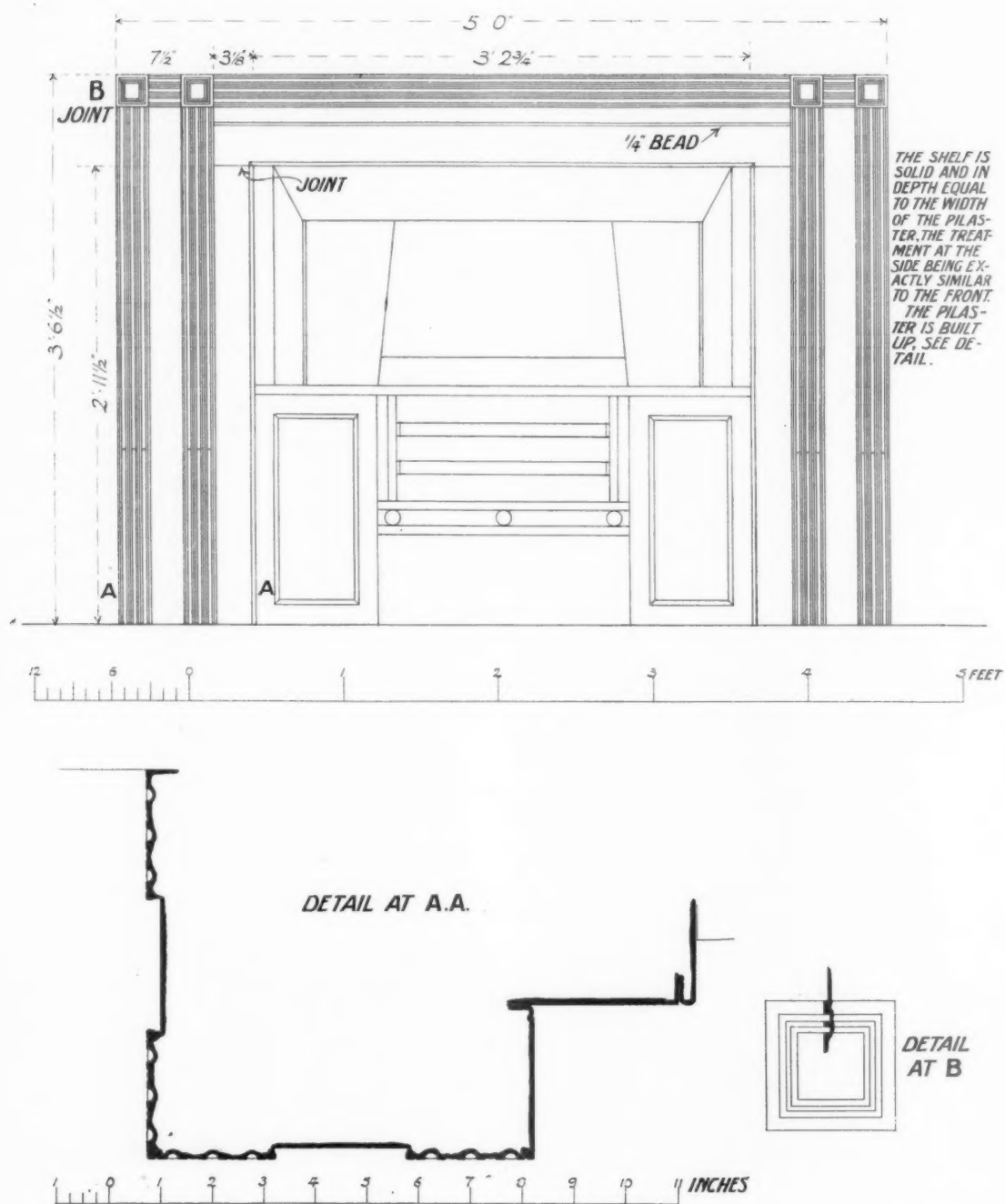
Perhaps the possibilities of modern design are best displayed in such buildings as involve the introduction of long, unbroken walls. Most of the buildings appear to tell us that their authors were conscious of having obtained a unique opportunity of showing us something, and it is only in back elevations and out-of-the-way fronts that this "exhibition-touch" has been omitted. Little fault, for instance, could be found with the treatment of the railway transport buildings. The design is admirably fitted to its purpose, and the plan has had to make no sacrifices to meet the demands of "Art." Moreover, it is a type of decoration which could with advantage be applied to all our English railway goods stations, and the approach to London would be robbed of some of its appalling ugliness. However, we live in a utilitarian age, and the cry of the client is not for beauty but for convenience; he "doesn't care very much about how the outside looks so long as it is comfortable inside, and he doesn't want to spend a halfpenny on the thing more than is absolutely necessary, you know." We have all of us met that client.

From a careful consideration of all the buildings, and comparing one with another, it appears abundantly as a conclusion that there be some things lying at their hearts like the maggot in apple-blossom. The most cherished form for a window is a semicircle at least, and on occasion even horseshoe. It has to be divided into three parts vertically before it is perfect, and the central division must be the largest. The main walls are frequently vertical, but whenever possible their surfaces are either battering or given the appearance of it. In the buttress-piles a form is arrived at closely approximating to an Egyptian pylon, and it certainly is generally effective. Colour is applied somewhat sparingly, but when used there is no hesitation about the brightness of its hue. What is out of place in Lombard Street might not appear incongruous in Lombardy, and the bright tints do not glare in the Italian sun. The climatic conditions resemble in some respects those of Greece; and if the Greeks thought fit to paint their temples of Pentelic marble with vermillion and blue, and saw that it was good, there can be no reason to cavil if the Italians bedeck their plaster palaces in a similar way under an equally brilliant sky.

ROBERT W. CARDEN,
Special Correspondent to the "Review."

The Practical Exemplar of Architecture.

IV.—Chimney-pieces.



CHIMNEY-PIECE AT THE SOANE MUSEUM.

MEASURED AND DRAWN BY FRANCIS BACON, JUNIOR.



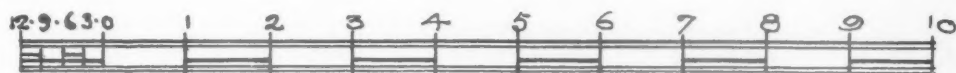
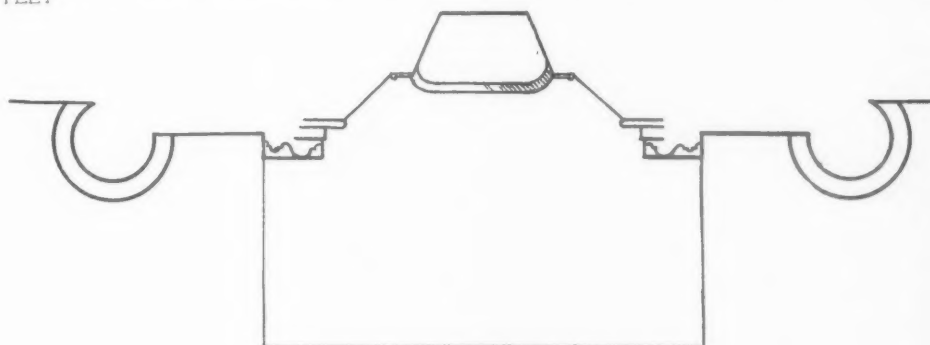
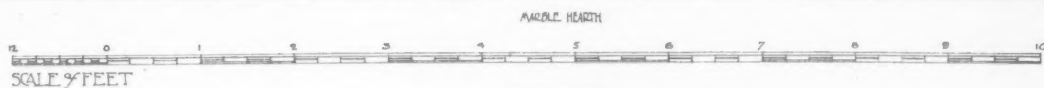
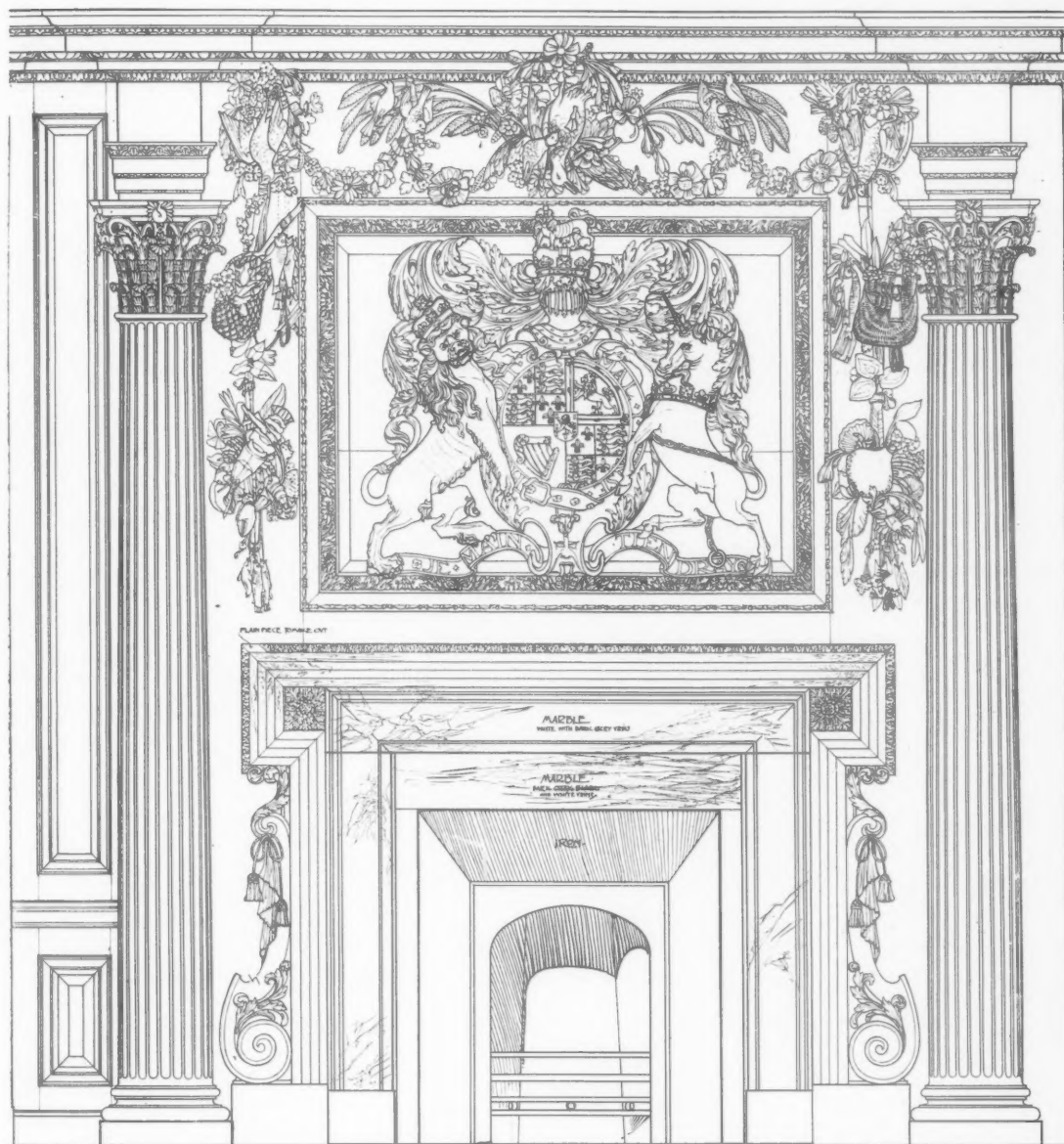
Photo: Arch. Review.

CHIMNEY-PIECE AT THE SOANE MUSEUM, LINCOLN'S INN FIELDS.



Photo: Cyril Ellis.

THE METROPOLITAN WATER BOARD'S NEW RIVER OFFICES.
CHIMNEY-PIECE IN THE WITHDRAWING ROOM.



THE METROPOLITAN WATER BOARD'S NEW RIVER OFFICES.

CHIMNEY-PIECE IN THE WITHDRAWING ROOM. MEASURED AND DRAWN BY T. FRANK GREEN.

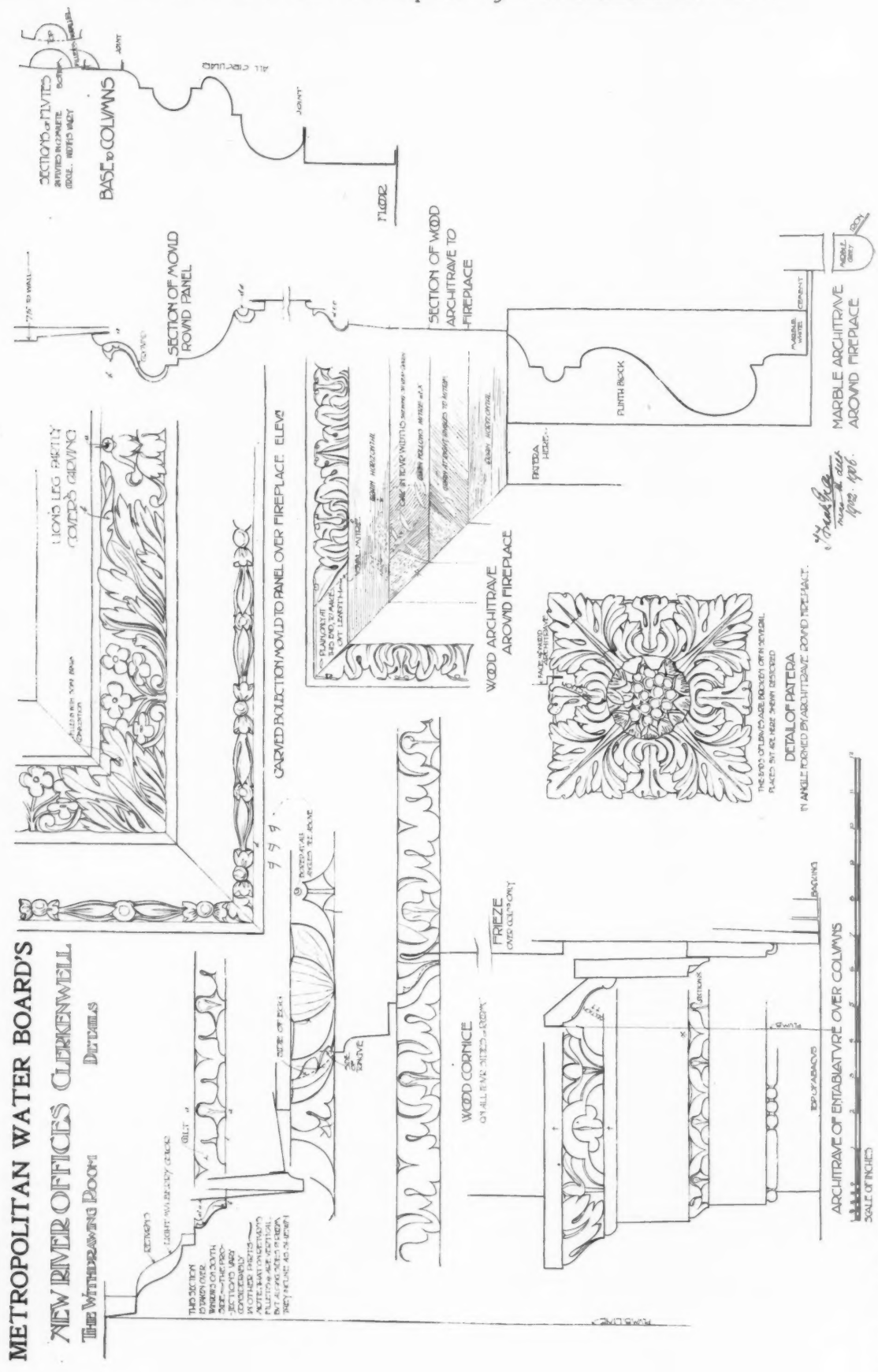




Photo : Cyril Ellis.

METROPOLITAN WATER BOARD'S NEW RIVER OFFICES.
DETAIL OF CARVING OVER CHIMNEY-PIECE IN WITHDRAWING ROOM.

Notes.

An Interesting Competition—The Futility of Competitions.

AN INTERESTING COMPETITION.—There are few fields of draughtsmanship, outside architectural design proper, which evoke in architects such keen interest as does lettering. In the advertisement columns will be found particulars of a competition opened by THE ARCHITECTURAL REVIEW which should be productive of admirable work. It will be noted that the lettering is not to be of the sort appropriate merely to sheets of drawings. As one or more of the winning alphabets will be used as initials in our columns the lettering should be a happy blend of typographic and architectural design. As to how far, if at all, frankly architectural *motifs* should be used is left entirely to the discretion of the competitors. It may, however, be not impertinent to point out that an ornamental letter is not sound typographically if the reader is left in doubt as to what letter is concealed under the decoration. The proprietors hope that the not ungenerous scale of the prizes will give an added interest, and that the entries may be as great in volume as they are sure to be distinguished in character. Several of the commended as well as the winning designs will be published in these pages after the competition is adjudged.

* * * * *

THE Chinese are a most ancient nation which has infinite capacity for taking pains, a feeling for decorative colour (especially in pottery) which it would be difficult to surpass, a delicacy of manipulation which is extraordinary, and an instinct for saving and for commercial advantage which is unsurpassable. Probably it was this last quality rather than the others which was found so admirable by the English as to lead to the borrowing from a nation which has not hitherto been considered quite in the van of progress the useless system of competitive examination—that race between the examiner and the crammer which is so profitless for the public, which is supposed to be thereby benefited through the discovery of the most capable public servants. Allied to this futile system is the whole machinery of competition, no matter what the subject may be, a process which requires, for any success in obtaining the good which is supposed to be inherent in it, firstly to attract to the competition those who are really capable, and secondly to ensure an unwarped judgment in those whose business it is to estimate the value of their efforts, joined to sufficient capacity to thoroughly appreciate the conditions of the problem and the means adopted for its solution. The usual result of competition (in any

direction) is to produce, not the best solution, but that which is most immediately telling.

In architecture, with which the readers of this magazine are more closely concerned, the disadvantages of competitions are very marked, and the only advantage which can be urged in their favour (which one must acknowledge is a considerable one) is that it has sometimes given the unknown architect an opportunity of gaining reputation and so establishing himself in practice which he would otherwise have had difficulty in obtaining. Against this advantage must be set, in the first place, the great expense to which all those are put who take a chance in the lottery, a total expense which is out of all proportion to the benefit gained by the profession from the execution of the work, if it is carried out, which is not always the case, showing that from the commercial point of view the system cannot be considered a success. Nor is it any more certain to be successful from the artistic point of view. Even supposing the really best design to gain the premium (which again is not always the case) it becomes a question whether the plan should be considered of the first importance or the elevations, and opinions will differ according to the idiosyncrasy of the judge; and as the best plan does not postulate the best elevation, and *vice versa*, the door is open for comparative failure in one or the other direction. And a great difficulty arises in connection with the judging—it is generally conceded now that a committee or public body is wise to invite an assessor to adjudge upon the merits of the plans submitted instead of expressing its own amateur opinion, though it has sometimes occurred that the award of the assessor has been disregarded when not in accordance with the wishes of the committee. If the assessor's name is known beforehand there is a temptation for the competitors to suit their designs to what are known to be his individual opinions and likings, which generally results in the appearance of weak *rechauffés* of designs which have already been carried out. On the other hand, if the assessor's name is not announced, desirable competitors are not attracted, since they do not feel sure that their works will be submitted to a competent and unbiased judge. But however that may be it is not in average human nature to forego the advantage of making work more telling by exaggeration, when it is to be set in competition side by side with other work and the prize for individual success is considerable, and this does not tend to the production of healthy art.

S. S. G.

THE NEW ROYAL VICTORIA
INFIRMARY,
NEWCASTLE-ON-TYNE.



H. PERCY ADAMS, F.R.I.B.A.,
W. LISTER NEWCOMBE, F.R.I.B.A.
Joint Architects.

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The New Royal Victoria Infirmary, Newcastle-on-Tyne.

THE new infirmary is built upon the pavilion system, and consists of eight ward pavilions and the various administrative buildings. The main front of the building faces the Leazes Park, and is almost due south.

The administration block is in the centre with pavilions grouped on either side, all being arranged to obtain the best possible aspect and the maximum of sunlight and air.

The ward pavilions have only two storeys of wards, and are so arranged that the medical wards are all on the first floor and the surgical wards on the ground floor; and on this latter level are the operating theatres.

The out-patient department is close to the entrance on the lower ground floor level.

The nurses' home is on the highest part of the site, facing the Jubilee Entrance to Leazes Park.

The laundry is at the lowest level of the site, in the least conspicuous position, and with the engine and boiler house in the basement under it.

The post-mortem room and mortuary are in an isolated building well away from the wards, and yet convenient for the staff.

THE ADMINISTRATION BUILDING.

This department is in the centre of the several groups of buildings, and entered from a separate porch.

Passing through the vestibule to the main hall two corridors branch right and left. The entrance hall is supervised from the porter's office, which overlooks the casualty rooms, and near is a room for telephone and telegraph.

Immediately on the right of the central entrance is a sitting-room for the assistant house surgeon, and next to this a room for the visiting consulting staff, and at the end of the corridor is the large medical library, panelled and fitted with oak book-cases, and with an ornamental plaster ceiling; the arms of the city are carved on the chimney-piece.

Contiguous to this library is a staircase communicating with the students' department, which, owing to the slope of the ground, has been arranged below the level of the library, but at the same time above the level of the ground.

The students can thus gain access to the operating theatres and the wards without passing through the main administration buildings. All the medical and surgical offices are concentrated in this part of the administration block, and close to the casualty reception department.

To the left of the entrance hall are the rooms for secretary and clerks, house governor, lady superintendent, and visitors' waiting room.

The service wing has been placed between the main corridor of the infirmary and the administration block, and contains large receiving rooms, rooms for stores, etc., and lifts working direct to the kitchen above.

The central hall is panelled with teak and leather with plaster enriched ceiling, and the arms of various districts connected with the infirmary emblazoned in the windows; from the hall a wide teak staircase leads to the first floor. In the centre is the Board room, so arranged as to take the fine oil paintings from the old infirmary, and on this floor are the house physician's sitting and bed rooms, and four sitting rooms and eight bed rooms for the house physicians and surgeons, store rooms, bath rooms, and lavatories. At the west end of the corridor is a dining hall for resident officers, with a door leading to the service corridor; and in the service wing on this floor are two other dining halls, one for sisters and staff nurses, and the other (a very large one) for nurses and probationers, with pantries in connection.

On the second floor of the service wing is the kitchen, amply lighted, and lined with glazed bricks, also fitted with all the most up-to-date kitchen fittings. There are sculleries for washing up and preparing vegetables, store-rooms and larders with north aspect, carving and distributing rooms, housekeeper's office, and an office for distributing the daily stores.

Situated on the upper floors in the front administration building is the accommodation for all the female servants, and access to these rooms can be obtained by the ward maids from the main corridor of the ward pavilions without passing through any other department; special lavatories are provided with hot and cold water laid on to each.

28 *The Royal Victoria Infirmary, Newcastle-on-Tyne.*

THE NURSES' HOME.

This is placed at the extreme west end of the main corridor, and is reached from the infirmary by way of a large winter garden, but the principal entrance is from a private garden on the western front.

There are three staircases at either end and in the centre allowing of easy access, and a double exit in case of fire from all the rooms; also a central lift is provided. On one side of the entrance on the ground floor are sitting-rooms and bedrooms for the assistant matron, and on the other side similar rooms for the night superintendent, and also a room for visitors.

In the south-west corner are large sitting-rooms for nurses and probationers, with kitchen and pantry, and a large cycle store-room on the lower ground level.

On the ground and upper floors are eighty bedrooms for nurses and six for housemaids. Each room faces either west or east, and has a fireplace and window and fitted furniture, and every floor is provided with large linen room, housemaids' pantry, etc., and the necessary sanitary adjuncts.

The total accommodation of the new infirmary is for 400 beds, of whom 192 will be patients in the medical department and 208 in the surgical department.

The medical department consists of:—

Four large wards of twenty-four beds and four wards of one for males	= 100
Two wards of ten beds with two wards of one bed each for children	= 22
Two wards of twenty-four beds with two separate wards of one bed each for females	= 52
Two wards of eight beds with one separate ward for female	= 18
	<hr/> 192

The surgical department consists of:—

Four large wards of twenty-four beds and four separate wards of one bed for males	= 100
Two wards of two beds for males	= 4
Two wards of twenty-four beds and each with two separate wards of one bed each for females	= 52
Two wards of ten beds each with one separate ward of one bed for females	= 22
Eight wards of one bed each for females	= 8
Two wards of ten beds with two separate wards of one bed each for children	= 22
	<hr/> 208

THE WARD PAVILIONS.

All the surgical wards are on the ground floor and the medical wards on the first floor. The pavilions are only two floors high, excepting the two at the eastern end of the site, where owing to a difference in the levels of the site they are three floors high, the lower floor not being used for wards but for porters' bedrooms, the special skin department, and the dispensary with rooms in connection.

The ward pavilions are not less than 80 ft. apart, and being axially north and south secure a maximum of sunlight and air. There is a staircase 5 ft. wide to each pair of ward pavilions with a passenger lift in the well-hole.

All the large pavilions are similar in detail, being designed for twenty-four beds each. Next to the entrance of the ward on one side is the ward kitchen, and on the other the sister's room. A day room with bay window is provided for each ward, also two single-bed wards. A room for the examination of secretions, a linen room, and small larder for milk, etc., and a room for patients' clothes are also provided.

The walls of the wards are lined with pale blue tiles to a height of 5 ft., and above they are cemented, and finished with enamel paint. The floors are laid with teak blocks, wax-polished; all angles and corners are rounded. The windows have double hung sashes with a lower deep rail so as to ventilate at the meeting rail, and above is a "fall in" or hopper with glass sides. At the end of the wards on one side are the bathrooms, and on the other side sink rooms and w.c.'s; these annexes are cut off from the wards by means of cross-ventilated lobbies, and between these annexes is a large open balcony.

Each large ward is 102 ft. by 27 ft. wide and contains twenty-four beds, and being 13 ft. high contains 35,802 cub. ft. or 1,500 cub. ft. per bed.

The wall space is 8 ft. from centre to centre of the beds.

The children's wards are only 24 ft. wide instead of 27 ft., and the walls are lined with tile pictures illustrating nursery tales.

The wards are all heated by means of open stoves and hot-water radiators; for ventilation the air is admitted through stoneware pipes, and passes through the radiators into the rooms; the extract flues for the vitiated air are next the ceiling, each ward having independent flues.

THE OPERATING THEATRES.

These are on the ground floor and level with the surgical wards. The large theatre is octagonal in shape, and has a marble gallery for students entered from off the main first-floor corridor; by

this arrangement students have a splendid view of the operation, and the staff have the whole of the floor area. There is a large north window, and the roof is almost entirely of glass, double glazed to obviate extremes of temperature. The walls are of white glazed tiles and the floor of marble terrazzo; the fittings are all of white porcelain.

In connection with each theatre are anæsthetic rooms, sterilising rooms, and waiting room.

THE LECTURE THEATRE AND CLASS ROOM.

These are placed under the large operating theatre at the lower ground level, the lecture theatre accommodating 100 students.

THE MORTUARY AND PATHOLOGICAL DEPARTMENT.

This is a separate building well away from the hospital buildings, but reached by the staff by a connecting corridor. The post-mortem room is fitted with two white porcelain tables, and has a laboratory adjoining it. The mortuary has a little chapel attached where a body can be viewed by friends.

THE CHAPEL.

The chapel has been built to the north of the main infirmary corridor, and west of central ward staircase, a true Greek cross, one arm being the chancel. There is seating for 140.

THE SKIN DEPARTMENT.

This is under the south-east ward pavilion close to the general out-patient department, and thus easily reached by out-patients from the main entrances. It consists of a large waiting-hall for men and women, Röntgen rays and waiting-room, a large consulting and demonstrating room, electrical diagnosis room, and four special bath-rooms, also rooms for Röntgen rays and high frequency in connection with the hospital.

THE OUT-PATIENTS DEPARTMENT.

This is situated close to the main entrance gates opposite St. Thomas Street, and so accessible for patients directly they enter the hospital grounds.

The consulting rooms are arranged round a large waiting-hall, and patients will pass from this through the consulting rooms to an outer corridor leading direct to a smaller waiting-hall for medicines, men and women being separately served at the dispensary hatches, and then passing directly outside; thus there will be no confusion and retracing of steps, but every patient will follow a definite route.

The consulting rooms have examination rooms opening off them, and each room has direct access to the outer corridor. An operating room is provided in connection with the surgical consulting room.

The ophthalmic room is 24 ft. long and is fitted with dark room for ophthalmoscope.

There is a surgical dressing-room for minor accidents and dressing next the entrance.

The dispensary is placed so as to be convenient for all the casualty rooms, and also for the rest of the hospital; it is well lighted, and has large laboratories and dispensers' room in connection.

THE CASUALTY ROOMS FOR ACCIDENTS.

This department is centrally situated, and on the same level as the ground floor (or surgical) ward corridor, and is easily accessible by carriages from the public road, and entirely away from the public gaze. The department is close to the medical staff rooms, to ensure immediate attendance by day or night; and adjoining the porter's central office there is a large room for accident dressing, with small examination rooms off it, and rooms for medical officer, nurse, and small wards for urgent cases, waiting-room for patients' friends, and space for ambulance.

THE LAUNDRY, BOILER HOUSE, AND WORKSHOPS.

These buildings are at the north end of the easternmost pavilion, the basement under the laundry being occupied by a very large boiler-house containing three high-pressure boilers each 30 ft. by 8 ft. diameter, and the entire hot-water heating of the building is controlled from this point by hot-water radiators and pipes supplemented by open fireplaces.

The laundry consists of receiving-room, wash-house, drying and airing rooms, ironing-room, and delivery-room, the linen following a definite route; the fittings are all of the most up-to-date character.

The workshops are at the north-east corner of the site, and comprise joiner's shop, a wood store, stick-chopping room, oil stores, also plumber's and engineer's shop.

The porter's lodge is next to the main entrance.

The entire lighting of the building is by electricity, the current being obtained from the public supply, and the lifts are worked by electric power from the same source.

THE BUILDINGS GENERALLY.

The buildings have little ornamentation, and that is concentrated in the administration building. Effect has been obtained by grouping of the

30 *The Royal Victoria Infirmary, Newcastle-on-Tyne.*

buildings and proportion; the elevations are all red bricks with stone dressings, and the roofs are covered with green Westmorland slates. The internal joinery is chiefly Columbian pine, the walls and ceilings are plastered, and the floors are all fireproof, that of the corridors being of terrazzo marble with tile dado to the walls.

THE ENGINEERING WORK.

The engineering work comprised the following:—

1. Steam generating plant.
2. Heating and hot-water service.
3. Electric lighting and electric treatment, telephones and bells.
4. Electric lifts.
5. Steam laundry.
6. Dispensary.

1. The boiler house is below ground level underneath the laundry. The plant consists of three Lancashire boilers, each 30 ft. long by 8 ft. diameter, built for a working pressure of 80 lb. per square inch. These are fitted with Messrs. Ellis and Eaves's system of heated induced draught. In the main flue at the back of the boilers is fixed a large Green's Economiser, and in a special chamber at the base of the chimney a rotary fan driven by an electric motor. The chimney is only 80 ft. high.

2. For the heating and hot water, steam from the boilers is supplied to calorifiers, each block being treated separately. Each calorifier supplies a system of mains from which hot-water radiators of the vertical loop type are fed. Similar calorifiers supply the hot-water service. The mains for both heating and hot-water service are of wrought

iron, and the whole of the condensed water is returned to the boilers.

3. Electrical energy is supplied from the public mains of the Newcastle and District Electric Lighting Co., Limited, on the direct current three-wire system at 480 volts across the outer wires and 240 volts between the outer and middle wires. A large number of motors are fed at 480 volts, and the whole of the lighting is carried out at 240 volts. The total number of lamps installed is equivalent to about 4,500 of 8-c.p., and there are some arc lamps in use in the laundry. The mains are armoured, braided, and lead-covered, made by Messrs. Callender & Co., and the wires by Messrs. Henley's, Limited. All the wiring is carried out in screwed-steel tubing laid in the floors and behind the tiling on the walls, and is accessible by means of inspection boxes. The fittings are of plain and strong design.

4. There are five electric lifts. That in the nurses' home is of the press-button type. Two are bed-lifts with switch control, and two serve the kitchen, which is on the top floor of the administration block, and these are used for the dinner wagon service to the wards.

5. The steam laundry machines are driven in groups by a number of electric motors. Gas irons are used, and the drying-room is a large chamber accessible to the laundry staff and supplied with warmed air by a fan. Drying-horses are not employed.

6. The dispensary is fitted with a very complete set of machines by various makers, and these are driven by several electric motors; and the workshop has a set of machine tools also actuated by a motor.

H. PERCY ADAMS.

THE NEW ROYAL VICTORIA INFIRMARY, NEWCASTLE-ON-TYNE.

H. PERCY ADAMS, F.R.I.B.A. } Joint Architects.
W. LISTER NEWCOMBE, F.R.I.B.A. }

CONRAD DRESSLER, Marlow; RALPH HEDLEY, Newcastle-on-Tyne, Carving.

G. S. LAIDLER, Newcastle-on-Tyne, Decoration and Heraldic Glazing.

H. COCKRELL, Clerk of the Works.

A. PRINGLE, Gateshead-on-Tyne, General Contractor.

SUB-CONTRACTORS:

Joinery and Decorative Woodwork—JOHN P. WHITE, Bedford.
Hot-water, Hydrants and Conservatory—MACKENZIE & MONCUR, Ltd., Edinburgh.
Plastering—JOHN RULE, Sunderland.
Sanitary Works—DOULTON & Co., London; TWYFORDS, Ltd., Hanley, Staffs; SHANKS & Co., Ltd., Barrhead, Glasgow.
Operating Tables—SHANKS & Co., Ltd., Barrhead, Glasgow.
Plumbing—TWEEDIE & Co., Newcastle-on-Tyne.
Ornamental Rainwater Heads—GEORGE WRAGGE, Ltd., Manchester.
Casements—CRITTALL MFG. Co., Ltd., Braintree.
Kitchen Fittings—JAMES SLATER & Co., Holborn Engineering Works.
Electric Lighting—FALCONER, CROSS & Co., Newcastle-on-Tyne.
Electric Fittings—F. & C. OSLER, Birmingham.
Lamps—W. MACFARLANE & Co., Ltd., Glasgow.
Locks—RAMSAY & Co., Newcastle-on-Tyne.
Entrance Gates—BROMSGROVE GUILD OF APPLIED ARTS, Bromsgrove.

Ornamental Plaster Work—G. P. BANKART, of the Bromsgrove Guild of Applied Arts, Bromsgrove.
Tiles—MAW & Co., Jackfield; H. WALKER & SONS, Newcastle-on-Tyne.
Lifts—R. WAYGOOD & Co., Ltd., London.
Furniture—MAPLE & Co., London; BROWN & HUGHES, Lancaster.
Stoves—E. H. SHARLAND & BRO., Manchester; THOS. ELSLEY, Ltd., London.
Strong Room—MILNER'S SAFE Co., Ltd., London.
Terrazzo Paving—DIESPEKERS, Ltd., London.
Special Decorations and Fittings for the King's visit—GOODALLS, Ltd., Manchester.
Expanded Metal for Roofs, &c.—THE NEW EXPANDED METAL Co., London.
Slating—ED. BECK & SON, Newcastle-on-Tyne.
Steam Generating Plant—DAVY BROS. Ltd., Sheffield.
Stained Glass Windows—CLAYTON & BELL, London.

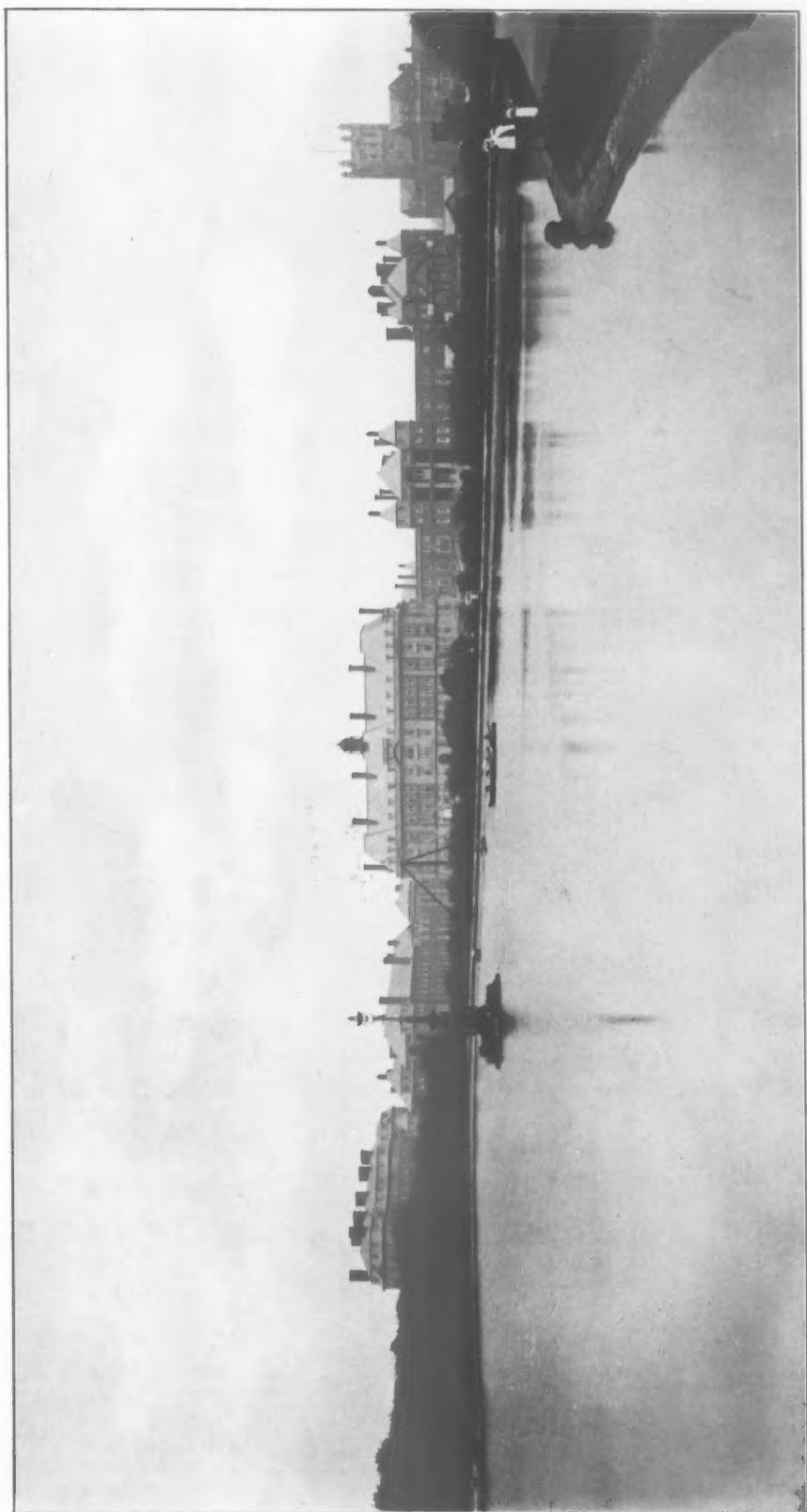


Photo: T. Lewis.

GENERAL VIEW FROM LEAZES PARK

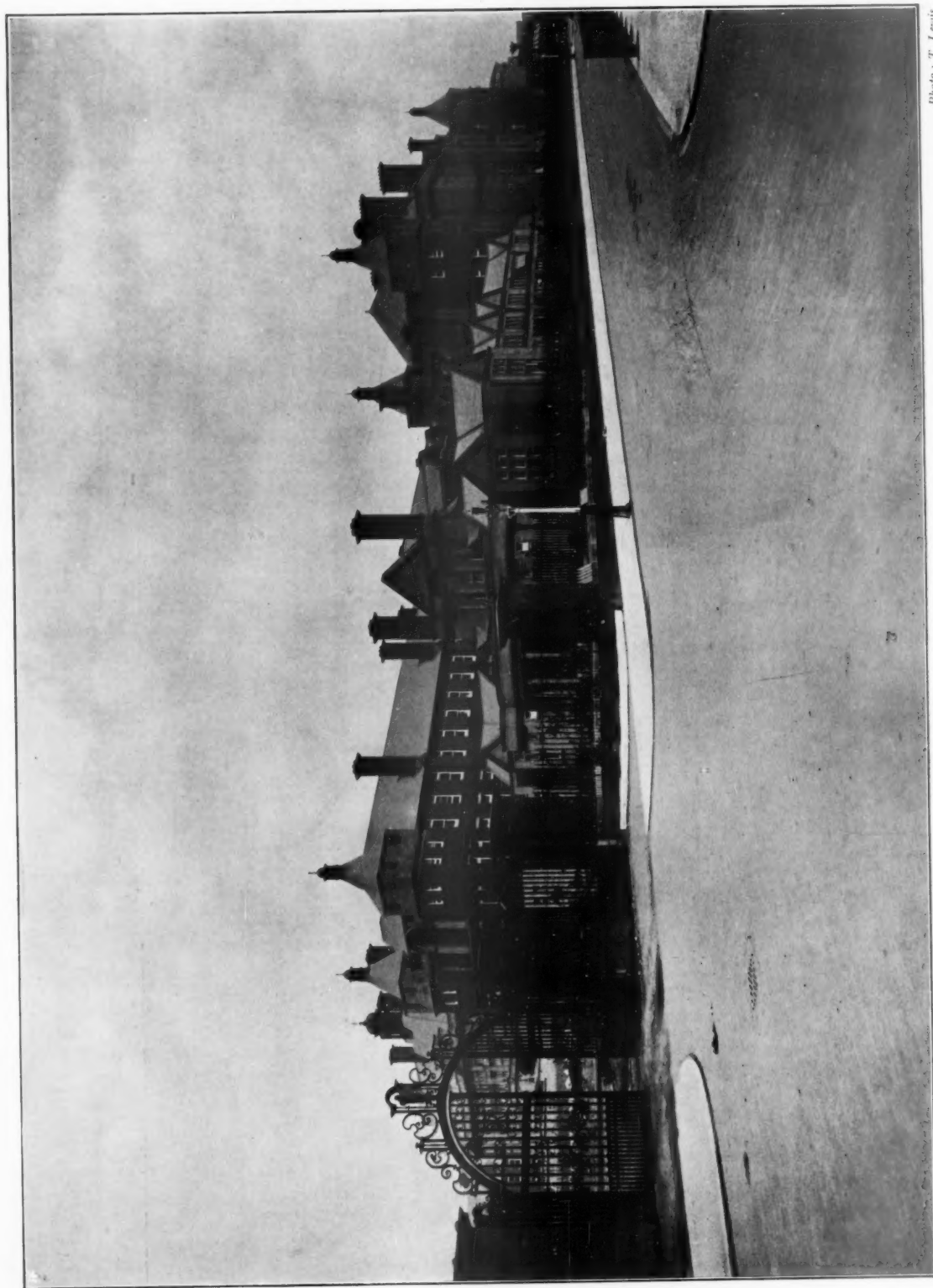


Photo: T. Lewis

GENERAL VIEW FROM QUEEN VICTORIA ROAD,



Photo: T. Lewis.

GENERAL VIEW FROM THE NORTH-WEST.

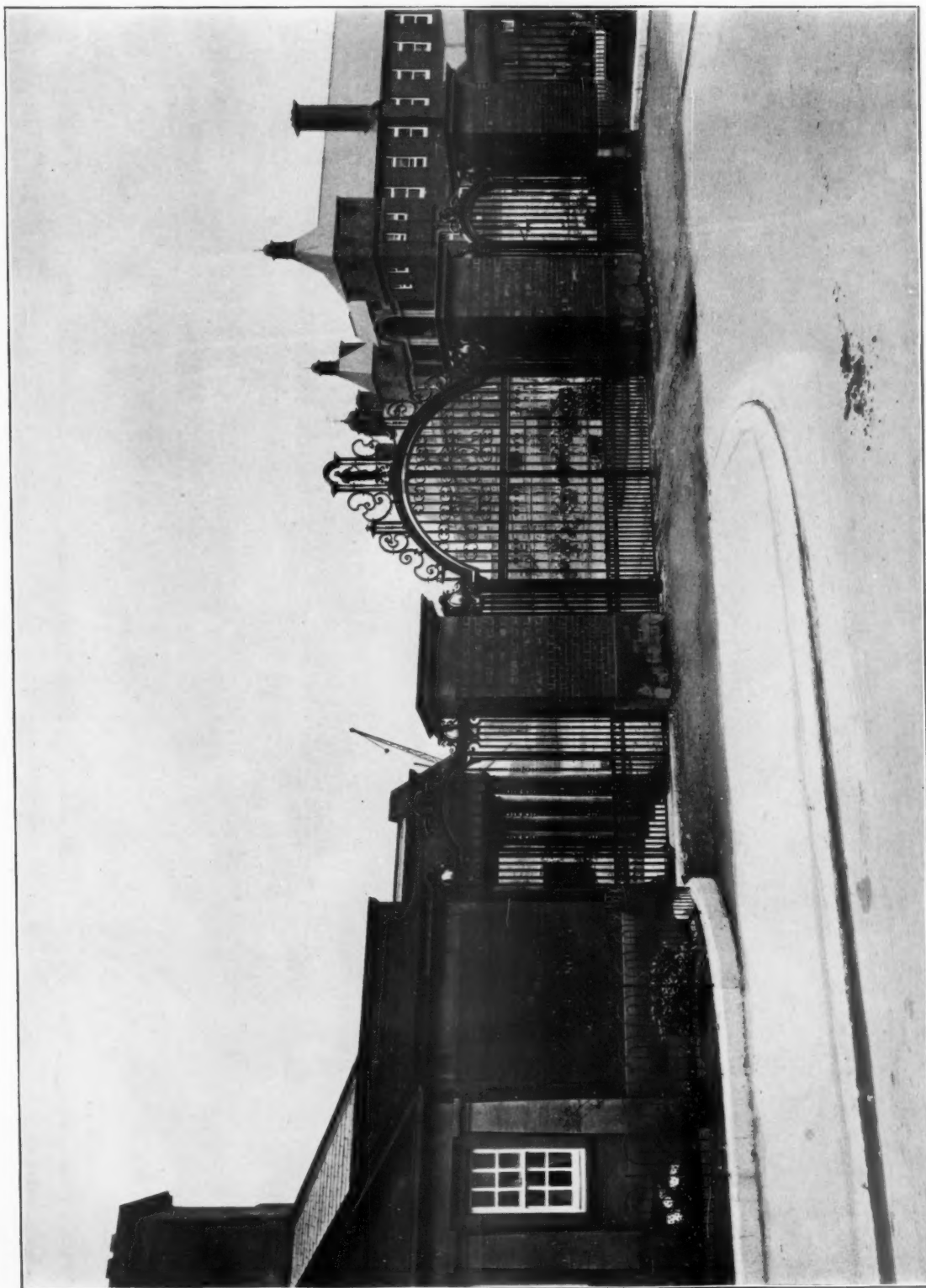


Photo: T. Lewis.

THE ENTRANCE GATES.



Photo: T. Lewis.

ENTRANCE GATES AND LODGE FROM THE GROUNDS.



GENERAL VIEW OF THE ADMINISTRATION BLOCK.

Photo: T. Lewis.



Photo: T. Lewis.

THE ADMINISTRATION BLOCK; FRONT VIEW.



Photo : T. Lewis

THE MAIN ENTRANCE PORCH.



THE ADMINISTRATION BLOCK FROM THE SOUTH-WEST.

Photo: T. Lewis.

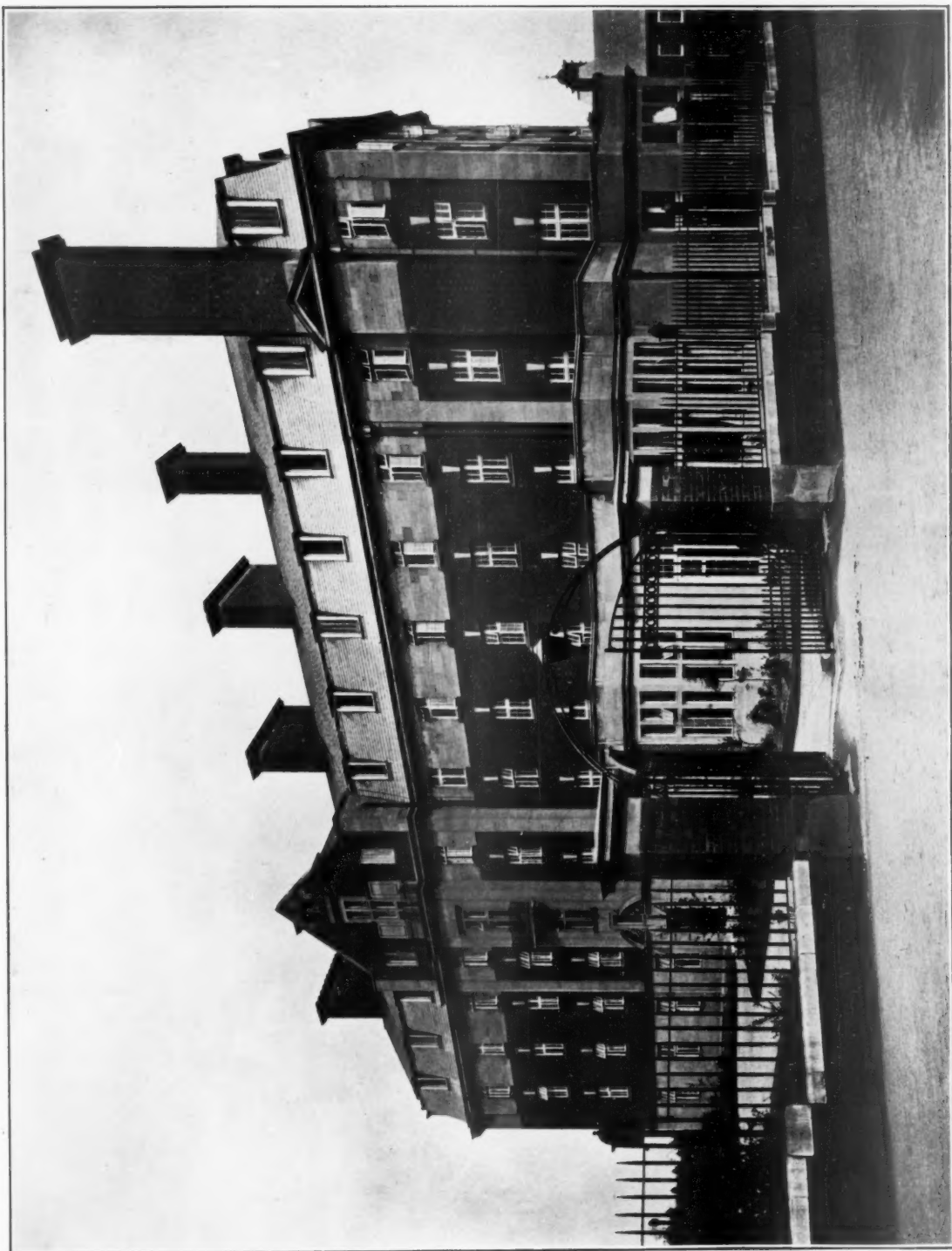


Photo : T. Lewis.

NURSES' HOME FROM THE SOUTH-WEST.



Photo: T. Lewis.

THE NURSES' HOME FROM THE SOUTH-EAST AND THE WINTER GARDEN.

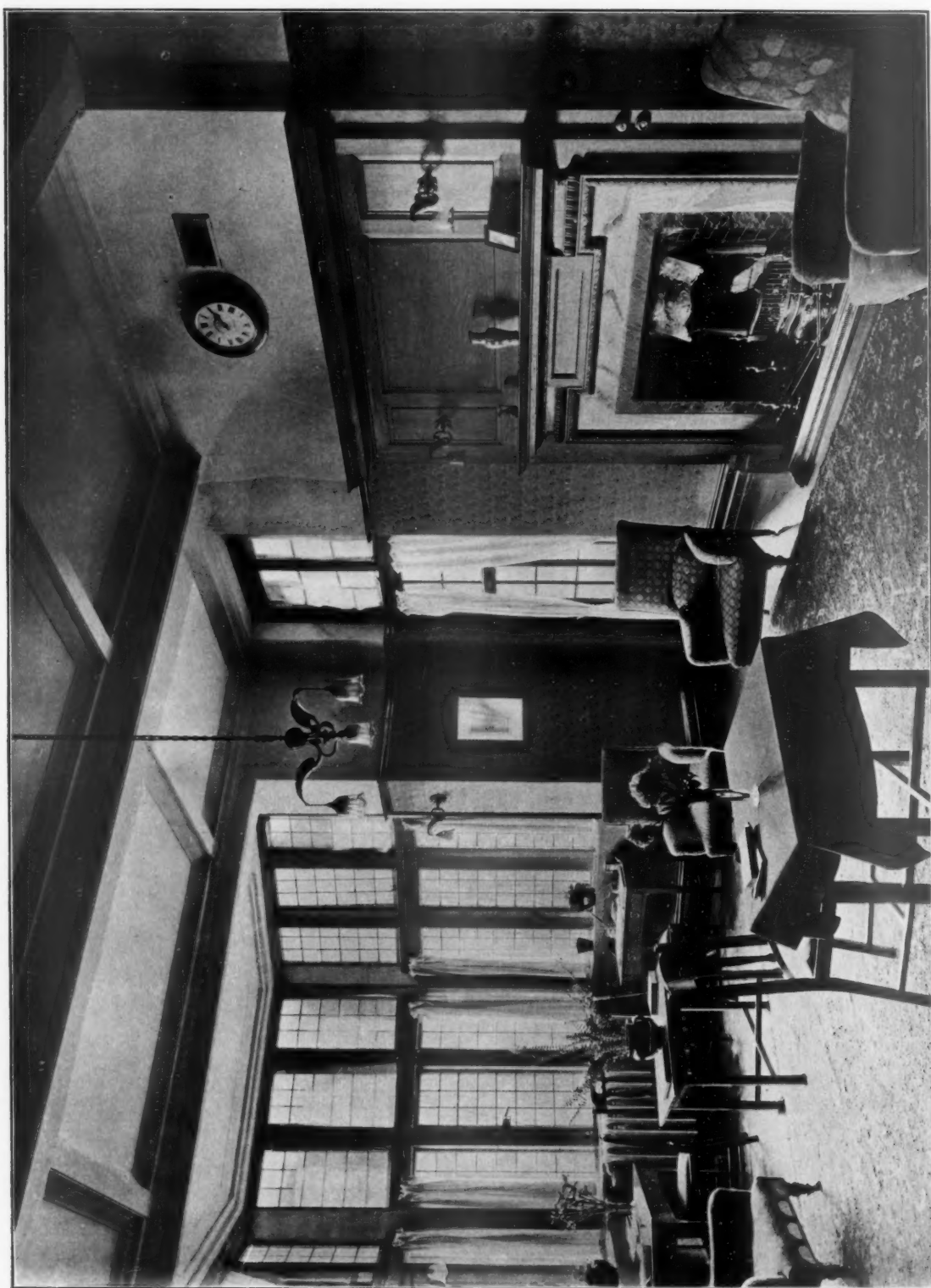


Photo : T. Lewis.

THE SISTERS' SITTING-ROOM.



Photo: T. Lewis.

THE WINTER GARDEN,

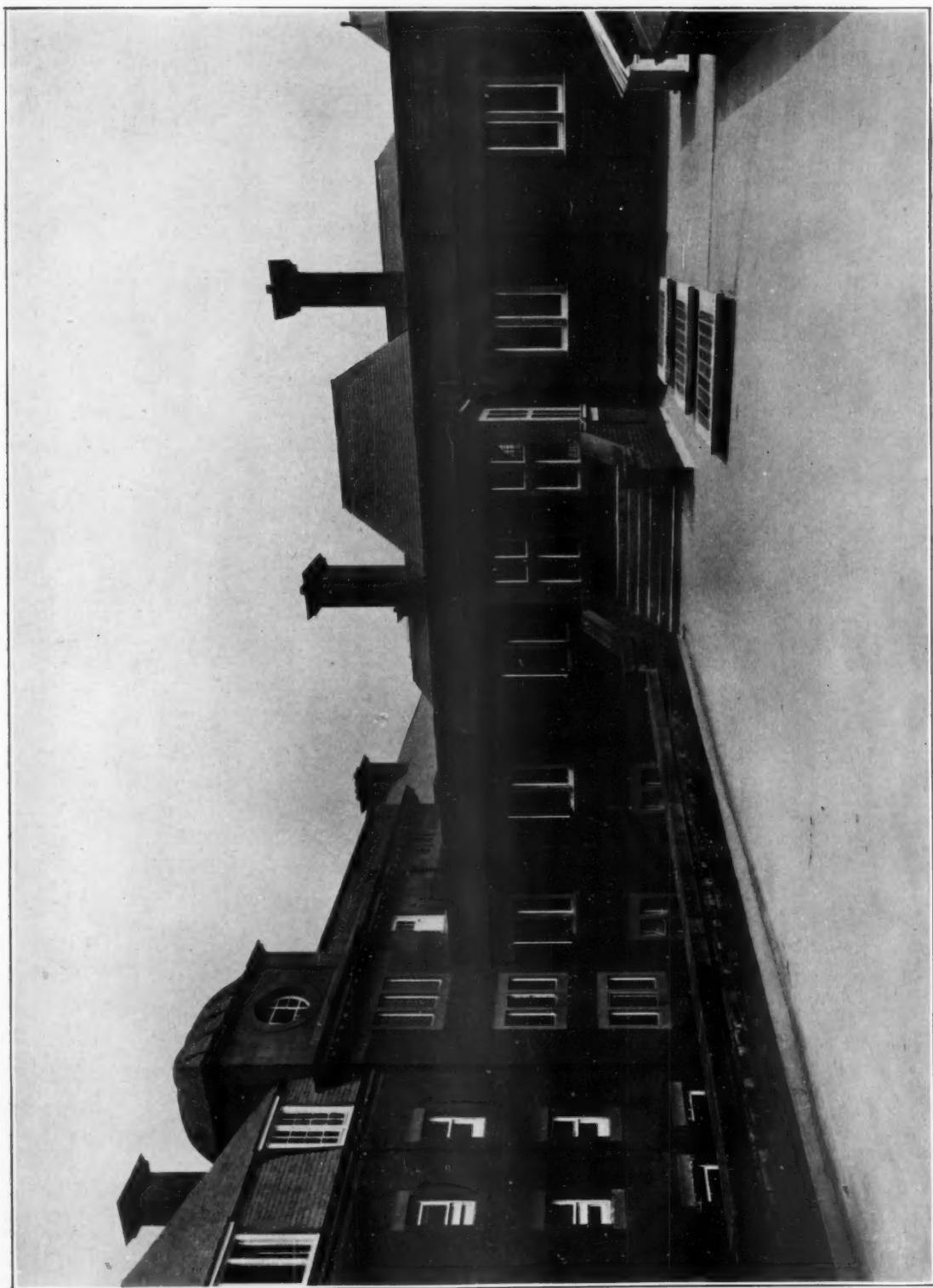


Photo: T. Lewis.

ROOF GARDEN.



Photo: T. Lewis.

THE OUT-PATIENTS' WAITING HALL. EXTERIOR VIEW.



Photo: T. Lewis.

NO. 2 PAVILION.



Photo & T. Lewis.

NO. 3 PAVILION.



Photo: T. Lewis.

VISITORS' ENTRANCE.



Photo: T. Lewis.

THE HALL FROM THE VESTIBULE.

VOL. XX.—D

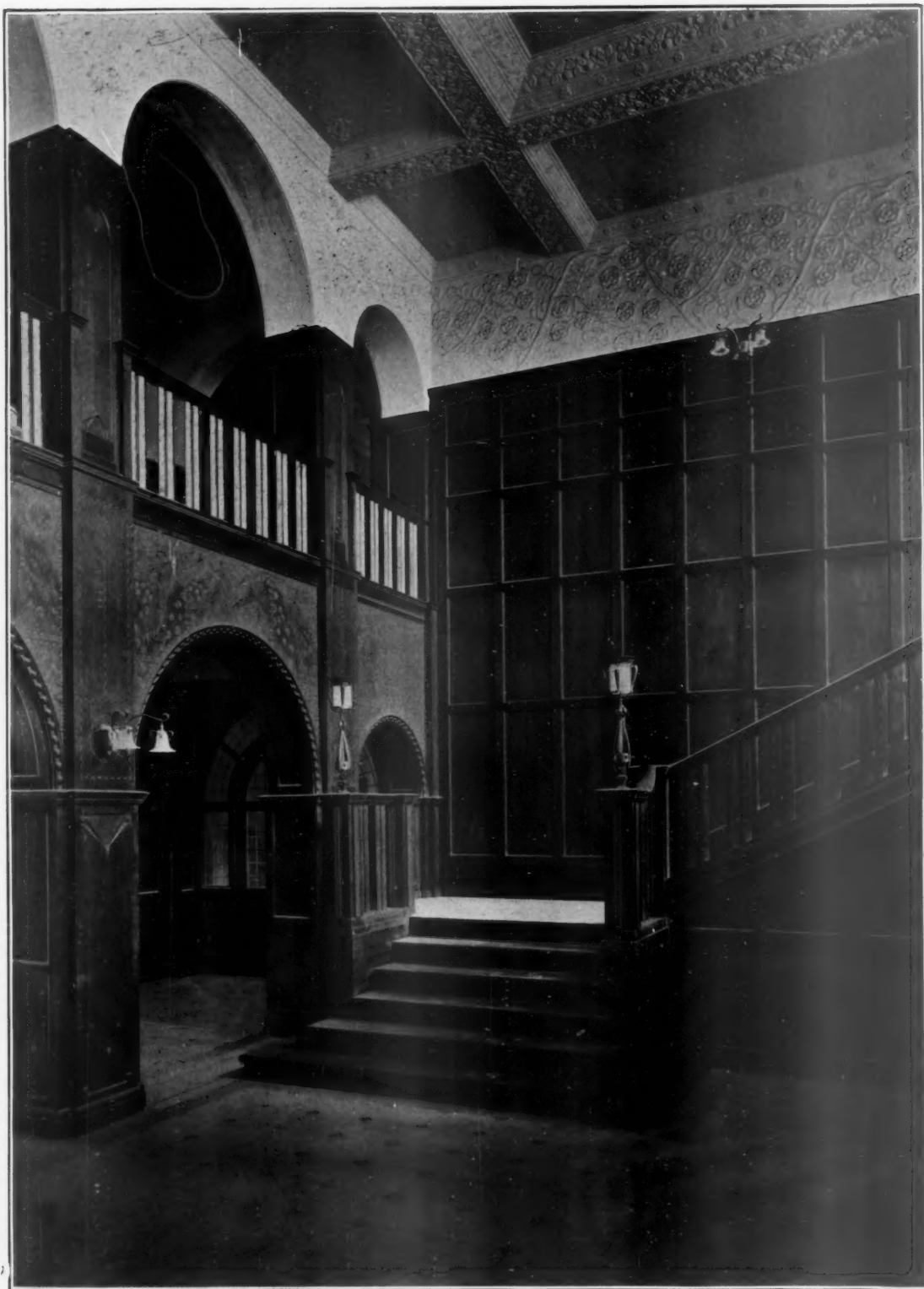


Photo: T. Lewis.

HALL AND PRINCIPAL STAIRCASE.



Photo: T. Lewis.

THE HALL FROM THE STAIRS.



Photo : T. Lewis.

MAIN CORRIDOR.



Photo: T. Lewis.

THE BOARD ROOM.



Photo: T. Lewis.

THE SISTERS' DINING-ROOM.

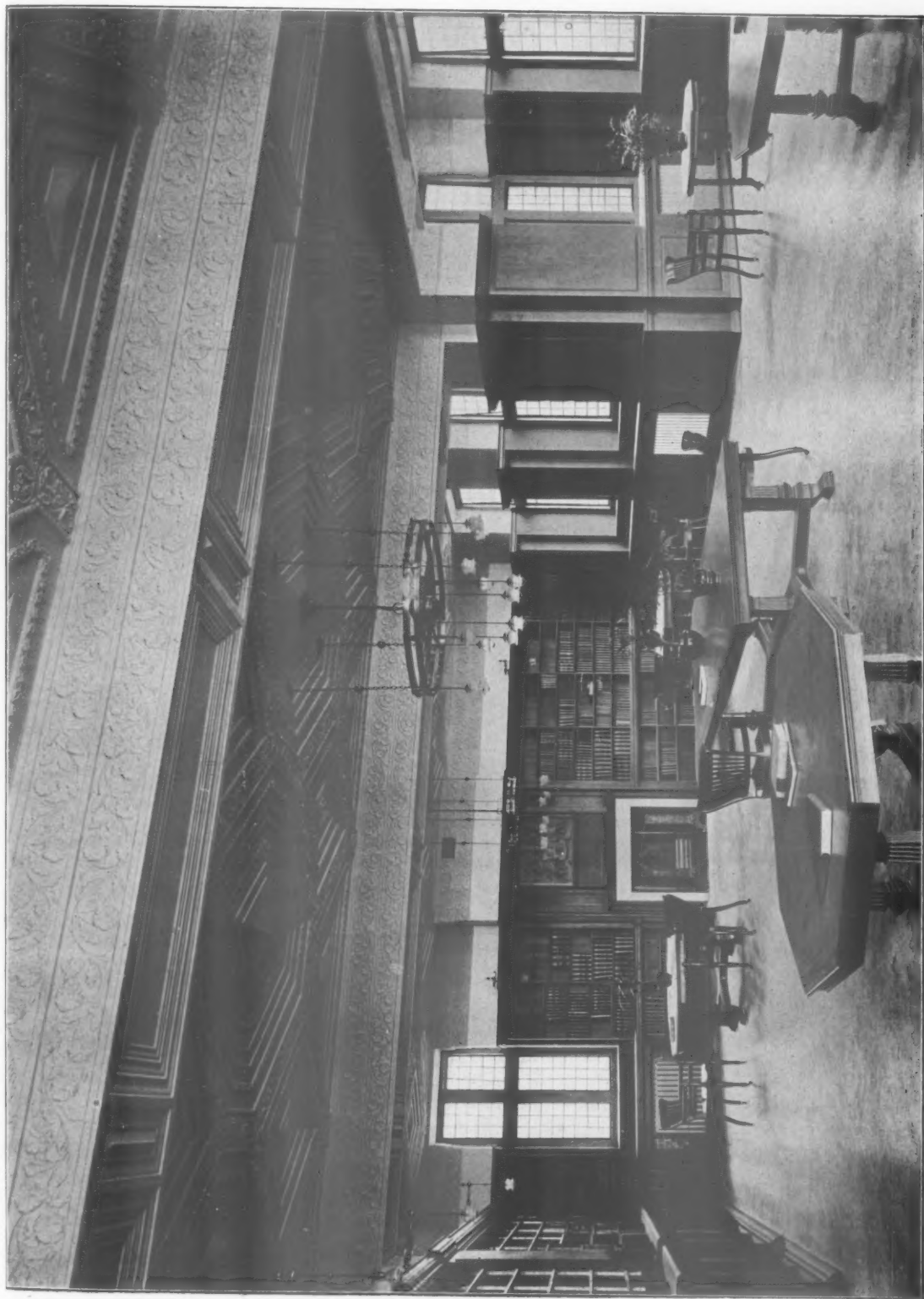


Photo : T. Lewis.

THE LIBRARY.



THE INTERIOR OF NO. 2 PAVILION.

Photo: T. Lewis.

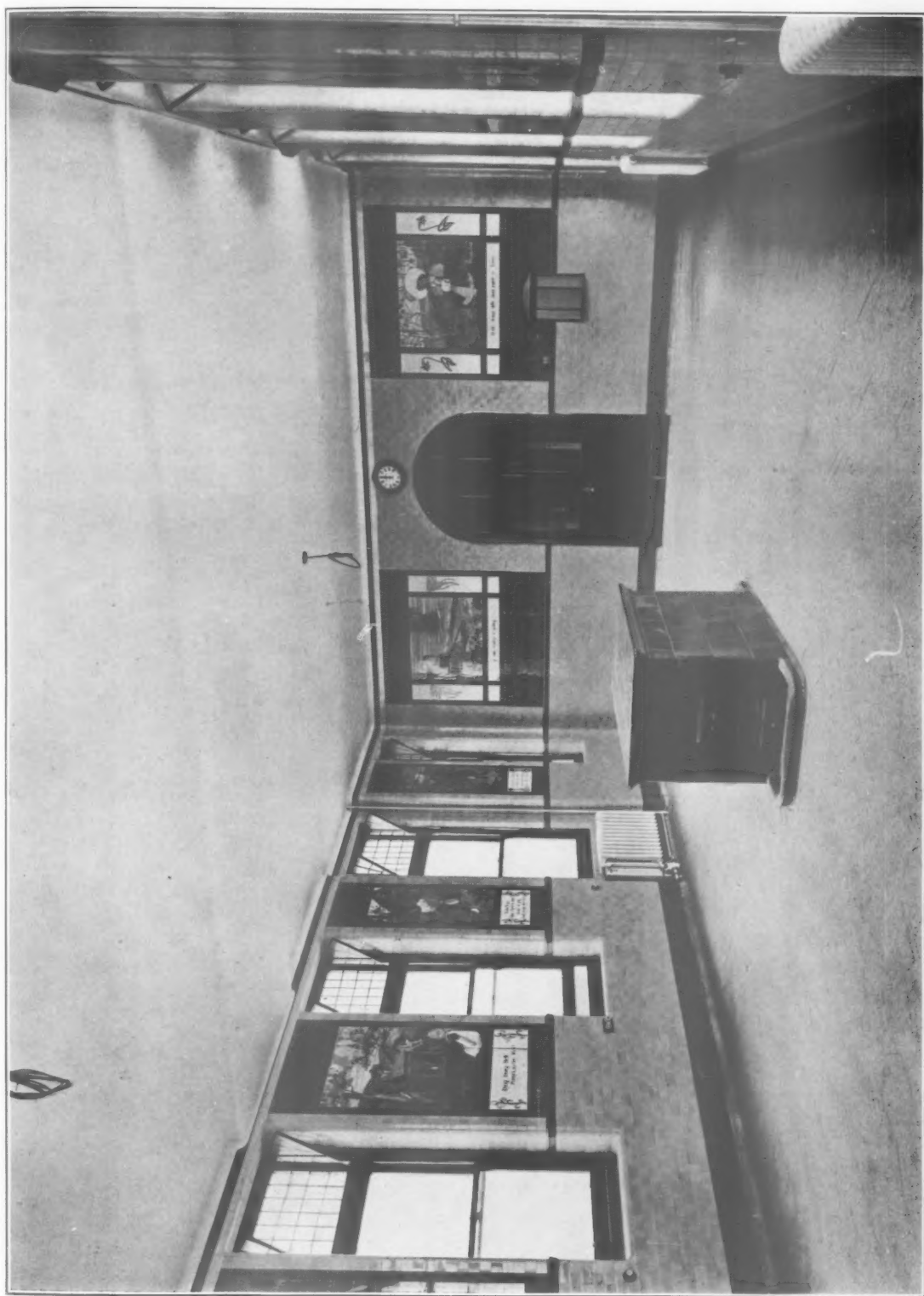


Photo: T. Lewis.

CHILDREN'S WARD.



Photo : T. Lewis.

THE OUT-PATIENTS' WAITING-ROOM.

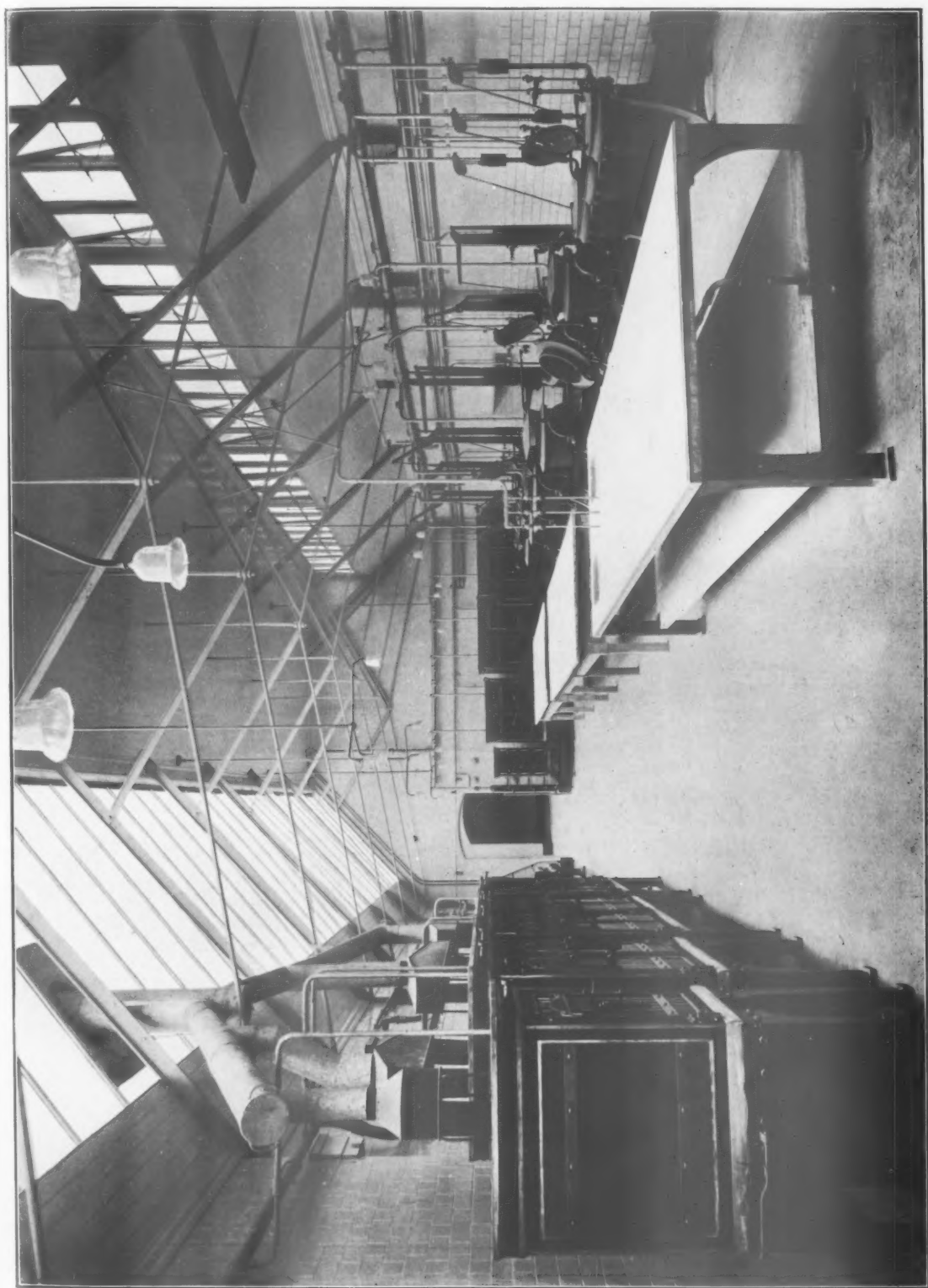


Photo: T. Lewis.

THE KITCHEN.

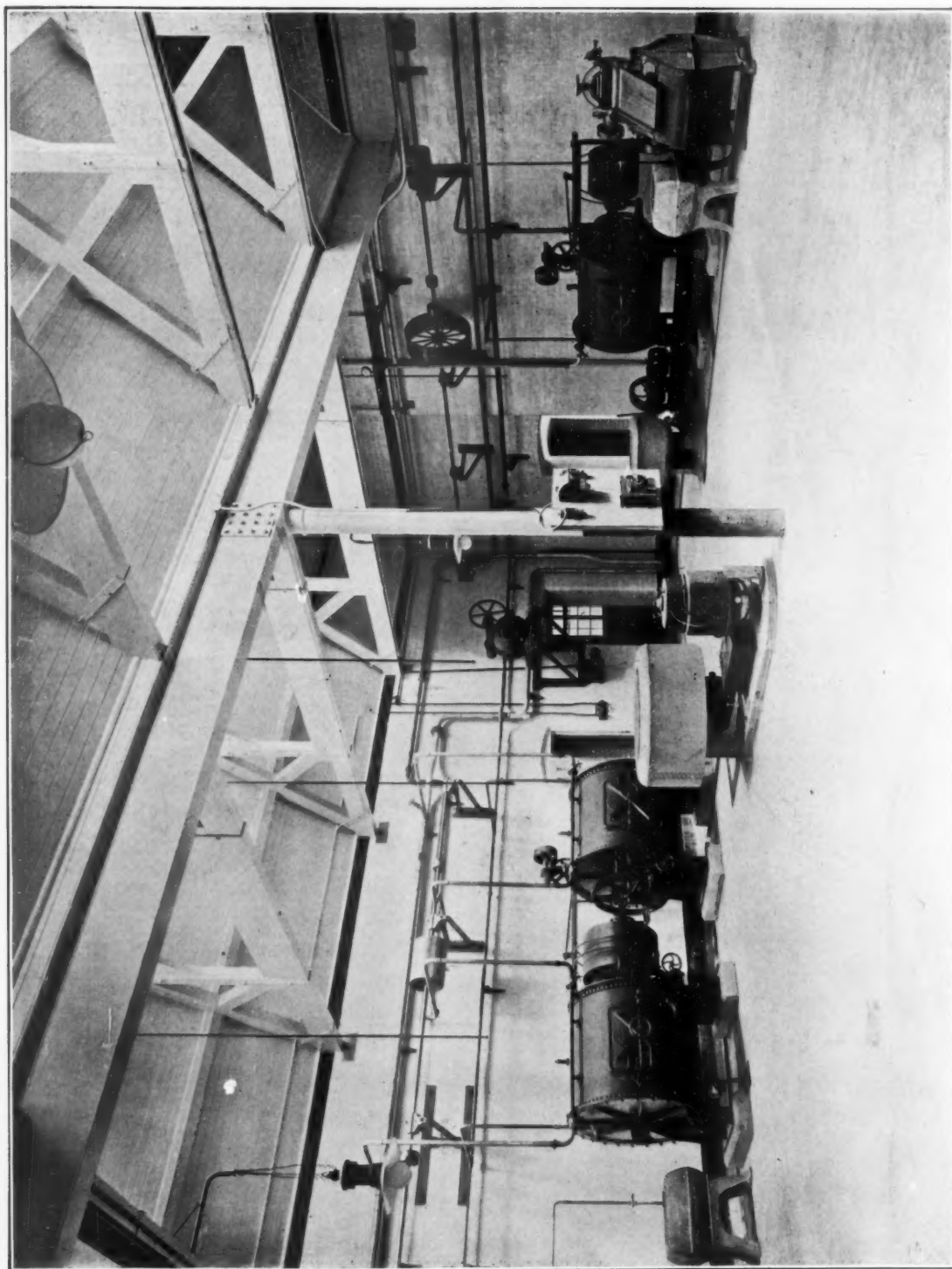


Photo: T. Lewis

THE LAUNDRY.